3Rs ACTION PLAN

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SOLID WASTE INTERIM STEERING COMMITTEE

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NOTE

3Rs ACTION PLAN

This background report documents current 3Rs initiatives in the Greater Toronto Area (GTA), identifies opportunities for coordination and collaboration among the GTA communities, and develops an action plan for improving the effectiveness of the Reduction, Re-use and Recycling efforts within the GTA.

This background report is being released by the Solid Waste Interim Steering Committee (SWISC) to the public and member Regional Councils in order to facilitate input to the SWISC planning process. The goal of the SWISC process is to develop a long-term waste management system for the Greater Toronto Area (GTA), to be in place by 1996, which is environmentally, socially, economically and technically sound.

This background report has been prepared under the direction of the Technical Committee to SWISC. SWISC will make its final recommendations on the 3Rs Action Plan only after it has received input from the public and Member Councils.

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TABLE OF CONTENTS

		Page
Summary		i
1.0	INTRODUCTION	1
2.0	WASTE REDUCTION	4
2.1	Household Hazardous Waste Reduction	4
2.2	Education On In-home Reduction	5
2.3	SWISC Support for National Packaging Protocol (NAPP)	5
2.4	Waste Reduction In Schools	6
2.5	In-house Public Sector Reduction Initiatives	7
2.6	Waste Reduction Through Home Composting	8
2.7	Waste Reduction In the Private Sector	8
2.8	Additional Reduction and Re-use Activities	9
3.0	MATERIAL RE-USE	10
3.1	Education on In-home Re-use of Materials	10
3.2	Cooperative Efforts with Non-Governmental Agencies	10
3.3	Re-usable Containers	12
3.4	Material Re-use In Schools	12
3.5	In-House Public Sector Re-use Initiatives	13
3.6	by-laws to Promote Reduction and Re-use	14
3.7	Educating the Private Sector	14
3.8	Waste Exchange	15
3.9	Commercial/Industrial Waste Audits	16
4.0	RECYCLING	17
4.1	Diversion of Organic Wastes	17
4.2	Expansion of Blue Box Program	21
4.3	Marketing of Recyclable Materials	23
4.4	Mandatory Residential Recycling	25
4.5	Recycling In Schools	25
4.6	In-House Public Sector Recycling Initiatives	26

SWISC

PRINTED ON RECYCLED PAPER

TABLE OF CONTENTS (Cont'd)

Page

4.7 Recycling Construction and Demolition Wastes 27
4.8 Planning by-laws 28
4.9 Education on Commercial Industrial Recycling 29
4.10 Composting Commercial Sector Organics 29
4.11 Commercial Industrial Material Recovery Facility 29
4.12 Other Incentives and Mechanisms for the Private Sector 30

5.0 OVERALL SUPPORT AND ADMINISTRATION 32

5.1 Monitoring Waste Diversion and Costs 32
5.2 Research and Development 33
5.3 Process for Instituting Disposal Facility Bans 33
5.4 Control of Wastes 34
5.5 Producer Pay Based on Overall System Cost 34
5.6 Feasibility of Long Term Storage 36
5.7 Monitoring of Action Plan Implementation 37

APPENDIX A Details on Existing Programs and Initiatives

APPENDIX B Report to SWISC, Citizens Working Group on 3Rs Action Plan March 24, 1990

APPENDIX C Listing of SWISC EOIs that Relate to 3Rs Action Plan

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SUMMARY

This Solid Waste Interim Steering Committee (SWISC) 3Rs Action Plan flows from the combined initiatives and plans of the communities within the Greater Toronto Area, including the Regions of Durham, Halton, Metropolitan Toronto, Peel and York.

Highlights of the Action Plan, presented according to the SWISC endorsed hierarchy of Reduction, Re-use and Recycling, are as follows:

WASTE REDUCTION

Household Hazardous Waste

Promote the use of alternative materials as a means of reducing the quantity of Household Hazardous Waste generated.

Current Household Hazardous Waste initiatives should continue and a study should be undertaken to select an appropriate overall strategy for the management of these materials.

Current regulatory requirements should be examined to determine if there are ways to increase the effectiveness of household hazardous waste programs without compromising the protection of the environment.

Efforts with senior governments should be initiated to ensure that hazardous household materials are labelled appropriately.

Education

Initiate a broad based area-wide program to educate the public on the benefits and techniques of in-home waste reduction and material re-use.

National Packaging Protocol

Endorse the efforts of senior governments to reduce the amount of packaging in the waste stream as set out in the recently released National Packaging Protocol.

Reduction and Re-use In Schools

Urge the Ministry of Education to encourage waste reduction and material re-use initiatives, including items for curricula, in the various School Boards throughout the Greater Toronto Area.

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School Board recycling coordinators should work aggressively with teachers, other school staff members and parent-teacher associations to implement measures for waste reduction and material re-use in schools. Educate students on ways of reducing waste and re-using materials both at school and at home.

Public Sector Reduction and Re-use Initiatives

Establish a comprehensive in-house waste reduction and material re-use programs amongst all public sector administrations.

Home Composting

Support Durham Region with their planned demonstration of promoting community-wide home composting in the Town of Pickering.

Private Sector Reduction

Promote waste reduction in the private sector as part of the broad-based educational effort.

Assist private sector participants in identifying waste reduction strategies as part of waste audit activities.

Continue the policy of charging high fees at disposal facilities.

Future Reduction Research

In the longer term, as part of potential future research initiatives, address the goal of waste reduction in the private sector.

Additional Measures

Identify additional waste reduction and material re-use initiatives.

MATERIAL RE-USE

Cooperative Efforts with Non-Governmental Agencies

Invite the non-governmental sector to submit a proposal on establishing a network of attended donation centres for clothing, clean fibre and small reusable items throughout the Greater Toronto Area.

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Area municipalities should provide non-governmental agencies with sites, on conveniently located public lands (e.g., community centres or arena parking lots), for their attended donation centres.

The broad educational programs discussed throughout this Action Plan should inform the public regarding the opportunities for "re-use" provided by non-governmental agencies.

Re-usable Containers

Encourage the Province to implement the greater use of returnable, re-usable containers and an accompanying deposit system.

by-laws to Promote Reduction and Re-use

Identify the alternatives and investigate the feasibility of using municipal by-laws to promote reduction and re-use.

Private Sector Re-use

Promote material re-use in the work place as part of the overall educational and promotional effort.

Expand programs to enhance the exchange of wastes within the Greater Toronto Area.

In the short term, maintain existing public sector based waste audit services and examine mechanisms for implementing a large scale private sector based waste audit capability.

In the longer term, it may be necessary to require all Commercial/Industrial generators to have a solid waste audit, performed by a qualified group, as a condition for the disposal of their remaining solid wastes.

RECYCLING

Diversion of Organic Wastes

Undertake a program to demonstrate the separate collection and subsequent composting of the household organic waste stream. Closely monitor system reliability, costs, quantity of diversion and compost quality/marketability. The composting facility should process between 10 and 200 tonnes per day.

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Support both Durham and Metro in their respective planned demonstrations of the collection and composting of source separated household organic wastes.

Ensure that the buildings and generic process elements of these demonstration projects are designed to ensure maximum future flexibility and continued use within a long term waste management system.

Request that the Ministry of the Environment provide a delivery date for specifications of the minimum quality of composted material for various applications. These specifications should include both environmental and agricultural variables.

Enhanced Blue Box

Provide all residents within the Greater Toronto Area with the opportunity to recycle, on a regular basis, the current basic set of materials including: news, glass containers, metal cans, other aluminum, PET plastic, old corrugated cardboard, tires and white goods.

In the medium term, as market constraints are overcome, all residents should be able to recycle additional materials such as: plastics, glossy magazines, box board, fine paper, other uncontaminated paper, and phone books.

Undertake research, development and demonstrations to determine the most cost effective method of diverting an increased number of source separated materials.

Support Metro's demonstration of a full scale material recovery facility for processing a commingled stream of recyclable materials.

In the medium term, to handle the increased number of materials, additional recycling vehicles will be required along with expanded or additional material recovery facilities.

Marketing Materials

In the short term, existing composition and market studies should be built upon to develop a clear understanding of the supply/demand situation for materials that are presently recycled and those that will be recycled in the near future. In addition, the role and structure of a potential Greater Toronto Area-wide marketing resource should be defined.

In the medium term, establish a marketing resource to provide marketing assistance to the communities within the Greater Toronto Area. The actions of this body should not hinder innovative local recycling initiatives nor impede recycling efforts elsewhere in the Province.

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Mandatory Recycling

Encourage all municipalities within the Greater Toronto Area to make residential recycling mandatory.

Recycling In Schools

Request that the province revise the criteria for Student Action for Recycling (STAR) program funding to permit municipalities to receive funding for recycling containers placed by them in community schools.

In-house Public Sector Recycling Initiatives

Implement a comprehensive in-house recycling program amongst all public sector administrations within the Greater Toronto Area.

Construction Sector

Liaise with the Toronto Home Builders Association and other industry organizations to implement additional measures for diverting construction and demolition wastes from disposal.

Proceed towards implementing the measures contained in the Expressions of Interest that address the diversion of construction and demolition wastes.

Investigate the implications of requiring material diversion as a condition for obtaining a demolition or renovation permit.

Planning By-laws

Work with municipal planners to identify mechanisms for revising existing by-laws in order to promote additional recycling efforts.

The filing of an acceptable waste reduction, re-use and recycling plan coupled with a performance bond to assure compliance should be a condition of approval for all new development.

Private Sector Recycling

Overall broad educational and promotional efforts should encourage recycling efforts in the private sector.

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Support Metro and Durham in implementing and evaluating their demonstrations of commercial organic waste collection and composting.

In the longer term, demonstrate the potential of a 200 to 400 tonne per day commercial/industrial material recovery facility.

Work cooperatively with area Chambers of Commerce in introducing recycling programs.

The strategy of banning material from landfill, once suitable recycling alternatives exist should be continued.

In the longer term, materials banned from disposal facilities may include: construction and demolition wastes, fine office paper, box board, organic wastes, plastics, and private sector Blue Box materials.

OVERALL SUPPORT AND ADMINISTRATION

Monitor Waste Diversion and Costs

The Ministry of the Environment should present, for discussion, details of mechanisms for monitoring the achievement of targets.

Establish a uniform, on-going system for monitoring both the individual quantities of various materials and the total quantities of materials diverted from landfill and incineration in both individual municipalities, the Regions, and the Greater Toronto Area. The cost of achieving these diversions should also be monitored.

Research Capability

In the longer term, consider, in cooperation with an organization such as a university, establish an on-going waste diversion research capability to serve the needs of the communities within the Greater Toronto Area.

Process for Instituting Bans

Ensure environmentally acceptable recycling alternatives for materials are in place prior to banning them from disposal. Implement all bans in a coordinated fashion across the Greater Toronto Area.

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Legislation to Direct Wastes

Amend appropriate legislation to ensure that the various waste streams can be directed to the appropriate facilities.

Producer Pay

In the short term, assemble information on the implications of a producer pay system.

In the longer term, institute a producer pay system for waste disposal based on an appropriate cost per tonne.

Also in the longer term, undertake a more detailed investigation of incorporating waste management costs and 3Rs incentives into the initial price of items.

Long Term Storage

Undertake a study to investigate the feasibility and implications of the long term storage of potentially recyclable materials.

Monitoring Action Plan Implementation

Monitor implementation of the 3Rs Action Plan on an on-going basis. The first review and reporting of progress is scheduled for the coming September.

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1.0 INTRODUCTION

During the past few years waste Reduction, Re-use and Recycling (3Rs) have assumed a key role in solid waste management systems. Each of the communities within the Greater Toronto Area (GTA), comprising the Regions of Durham, Halton, Metropolitan Toronto, Peel and York, have been actively involved in their own 3Rs initiatives.

The public consultation program of the Solid Waste Interim Steering Committee (SWISC) held during October and November of 1989 identified a number of public concerns regarding the need to more aggressively implement the 3Rs Programs to achieve the 50 percent diversion from landfill and incineration faster. In addition a number of ideas have come out of the Request for Expressions of Interest (REOI) process.

In response to these developments and the need to achieve provincial diversion targets SWISC has prepared this Action Plan for the diversion of wastes.

The objectives established for the task are:

- To document current 3Rs initiatives;
- To identify opportunities for collaboration among the GTA communities; and
- To develop an Action Plan for improving the effectiveness of the Reduction, Re-use and Recycling efforts within the GTA.

Appendix A of this document summarizes, in tabular form, the 3Rs activities that are presently operational in the various Regions and Municipalities.

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The process for identifying opportunities for collaboration centred around three workshops attended by representative 3Rs staff members from the Municipalities, Regions and Metro, together with representatives of Governments Incorporating Procurement Policies to Eliminate Refuse (GIPPER), the Ministry of the Environment (MOE), the Recycling Advisory Committee (RAC), and the Recycling Council of Ontario (RCO). The output of these workshops was refined with input from the SWISC Technical Committee and interested members of the public. Documentation of a number of larger issues raised by informed members of the public is provided in Appendix B.

This Action Plan is formulated on a number of guiding principles including:

- Endorsement of the 3Rs hierarchy of Reduction, Re-use and Recycling
- Recognition that removing Household Hazardous Wastes from the stream of materials to be managed is of critical importance to both the implementation of other 3Rs measures and the protection of the environment; and
- Material markets are key to recycling, and therefore a complete cycle perspective culminating in the purchase of appropriate end products must be adopted.

In large measure this document provides a compendium of the achievements and current plans of the individual SWISC parties, Durham, Halton, Metropolitan Toronto, Peel and York. Through the process of co-operatively working together and listening responsively to the ideas and concerns of the public this Action Plan sets out a comprehensive set of measures for all sectors within the Greater Toronto Area.

As this Action Plan flows from the established programs and plans of the SWISC members, it represents, in large measure, the highest common denominator of planned activity. Work on implementing some of the identified measures has begun already.

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Other activities require more extensive detailed planning together with the allocation of responsibilities and funding. Throughout the Action Plan an initial responsibility has been assigned. This clearly identifies the party or parties responsible for taking the next step. It is not intended to reflect an on-going responsibility.

In certain cases SWISC support for an activity to be undertaken by Metro or one of the Regions has been recommended. This support implies that the project is supported by all SWISC members and that it should receive top priority with respect to provincial funding and the processing of any required approvals.

Given the strong desire to act quickly on implementing 3Rs initiatives coupled with the dynamic nature of the implementation process, the Action Plan is presented in its present form for broad public comment. In the coming months, the implementation of activities, detailed planning, allocation of responsibilities and setting of target completion dates will continue. A progress report on these activities will be issued in September of this year.

The balance of this document details the Action Plan for working towards the goal of 50 percent diversion from landfill and incineration by the year 2000. The Action Plan is organized according to the SWISC endorsed hierarchy of Reduction, Re-use and Recycling. A concluding chapter sets out a number of additional action items that pertain to the overall support and administration of the initiatives.

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2.0 WASTE REDUCTION

Waste reduction in general and hazardous waste reduction in particular are the top priority areas for action. In this section a set of action items for implementation is identified.

2.1 Household Hazardous Waste Reduction

Household Hazardous Wastes (HHW) represent a small but very important component of our solid waste. Removal of these materials from the ordinary solid waste stream will yield important environmental benefits.

Promote the use of alternative materials as a means of reducing the quantity of Household Hazardous Waste generated.

Action: SWISC

Continue current HHW initiatives and undertake a study to document the costs and effectiveness of the various approaches including:

- **Special HHW drop-off day**
- **Permanent HHW depots**
- **"Toxic Taxi" to pick up materials on request**

On the basis of this review, a comprehensive strategy for managing these materials should be implemented on a priority basis.

Action: SWISC

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Examine the current regulatory requirements to determine if there are ways to increase the effectiveness of HHW programs without compromising the protection of the environment. In particular, the issue of providing for the return of hazardous materials to retailers should be addressed.

To assist consumers in identifying these materials and in dealing with them in an environmentally sound manner, senior governments should be urged to ensure that hazardous household materials are labelled appropriately.

Action: Ministry of the Environment

2.2 Education On In-home Reduction

In general, waste reduction at source represents the best approach to solid waste management. Broad public education on approaches to reducing wastes represents an ideal area for collaboration among the various communities within the Greater Toronto Area, as mass media communication channels can readily be employed.

Initiate a broad based area-wide program to promote the reduction ethic and educate the public on the benefits and techniques of in-home waste reduction.

Action: SWISC

2.3 SWISC Support for National Packaging Protocol (NAPP)

It is recognized that the packaging of consumer and household items represents a significant component of the solid waste stream. Packaging is often a composite of several different materials and therefore difficult to recycle. Efforts are underway at both the

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Federal and Provincial levels to address this issue.

Endorse the efforts of the National Task Force on Packaging to reduce the amount of packaging in the waste stream by supporting the six packaging policies for Canada as set out in the National Packaging Protocol (NAPP).

Action: SWISC

The Province should provide details on its waste reduction program including its waste reduction targets.

Action: Ministry of the Environment

2.4 Waste Reduction In Schools

Our next generation of citizens are presently learning many basic life skills in our schools. Our students should be learning the importance of waste reduction and applying this knowledge to reducing the solid waste stream.

The Ministry of the Environment has established the Student Action for Recycling (STAR) program to assist School Boards in this area.

To date, the implementation of programs within the various School Boards across the GTA has been mixed as different Boards place varying degrees of emphasis on the "Green 3Rs".

Urge the Ontario Ministry of Education to encourage reduction, re-use and recycling programs in the schools within their jurisdiction.

Urge the Ontario Ministry of Education to assist in raising the priority of

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waste reduction initiatives and the inclusion of waste reduction in curriculum in the various School Boards throughout the Greater Toronto Area. Each Board (or group of Boards) should establish, as soon as possible, a 3Rs coordinator with a support budget to provide a focus for school initiatives and collaboration with local municipal 3Rs staff. The broad based educational and promotional programs called for throughout this Action Plan should address, in general terms, the issue of waste reduction in schools.

Action: SWISC, Ministry of the Environment

2.5 In-house Public Sector Reduction Initiatives

The public sector can lead the way in demonstrating waste reduction in public buildings including all government offices.

Establish a comprehensive in-house waste reduction program amongst all municipal administrations and other public sector organizations within the Greater Toronto Area. Examples of specific measures include:

- **Encouraging people to "lug-a-mug" to meetings**
- **Attempting to use less paper, and**
- **Identifying ways of reducing the amount of packaging used.**

Action: Ministry of the Environment,
All Regions and Area Municipalities

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2.6 Waste Reduction Through Home Composting

Home composting represents an approach for reducing a major part of the household organic waste stream in rural and lower density urban areas. To date, home composters have been distributed, on a limited basis, in a number of communities. A variety of different models of home composters are being field tested by a region to determine their performance. Investigations indicate that although many of the units are being used, they are not achieving the desired waste reduction due to improper operation. There is at present very little information on the waste reduction achievable by the community-wide deployment of home composters coupled with intensive on-going promotion and education regarding their use.

SWISC supports the Region of Durham in its planned demonstration of promoting community-wide home composting in the Town of Pickering. The results on the reduction achieved by this demonstration should be closely monitored, evaluated and shared.

Action: Durham

2.7 Waste Reduction In the Private Sector

Waste reduction must play an important role in achieving diversion targets in the institutional, retail, commercial, and industrial sectors.

Some specified action items include:

Promote waste reduction in the private sector as part of the broad-based promotional and educational efforts. These messages must both raise the

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awareness regarding reduction and be targeted to the needs of specific sectors.

Assist private sector participants in identifying waste reduction strategies as part of waste audit activities.

Continue the policy of charging high fees at disposal facilities thus providing a strong monetary incentive to reduce.

In the longer term, as part of potential future research initiatives, address waste reduction in the private sector.

Action: SWISC, All Regions and Area Municipalities

2.8 Additional Reduction and Re-use Activities

SWISC has endorsed the hierarchy of Reduction, Re-use and Recycling in response to strong public support for this policy. Even with the endorsement of this hierarchy, action and plans to date have generally placed more emphasis on recycling. This has likely occurred because Recycling involves the more easily managed issues of technologies and materials while Reduction and Re-use relate more to the broader issues of people's attitudes and habits.

Identify additional waste reduction and re-use initiatives with input from all sectors and interested parties.

Action: SWISC

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3.0 MATERIAL RE-USE

Re-use represents the second level in the hierarchy of solid waste management initiatives. As with reduction, there are a range of measures to be implemented in both the public and private sectors.

3.1 Education on In-home Re-use of Materials

Re-use in the home goes hand-in-hand with waste reduction. For example, many containers can be re-used as an alternative to disposable wrapping materials. At a neighbourhood level, garage sales and church rummage sales serve to promote the re-use of items. Numerous other opportunities exist.

The broad-based public education programs should include information on the benefits and techniques for re-using materials in the home.

Action: SWISC

3.2 Cooperative Efforts with Non-Governmental Agencies

Over the years non-governmental agencies, such as Goodwill Industries, have provided a mechanism for re-using clothing and other items. Due to a range of constraints, the collection activities of a number of these agencies have diminished over the years.

In response to the SWISC process, Goodwill Industries, the agency with the largest material collection network, indicated an interest in expanding their efforts in this field.

A formal proposal initiation should be issued to the non-governmental sector

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on providing a network of attended donation centres throughout the Greater Toronto Area. These centres should receive clothing, clean fibre and other small re-usable items.

Action: SWISC

Area municipalities should provide these agencies with sites, on conveniently located public lands (e.g., community centres or arena parking lots), for their attended donation centres.

Action: Area Municipalities

Inform the public regarding the opportunities for "re-use" provided by non-governmental agencies such as Goodwill, St. Vincent de Paul, the Salvation Army, Waste Not, Woodgreen Red Door, Tools for Peace, the Canadian Foundation for World Development, and various other church/religious organizations. This should be done through the broad promotional educational programs discussed throughout this Action Plan.

Action: SWISC

In parallel, area municipalities should work cooperatively with non-governmental agencies in fostering the re-use of larger items such as white goods (e.g., refrigerators and stoves) and furniture. This process can be initiated by inviting these agencies to participate in a workshop with municipal recycling staff to explore these strategies in more detail.

Action: SWISC, All Regions and Area Municipalities

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3.3 Re-usable Containers

The advent of the Blue Box program has lead to a movement away from a system of deposits and returnable containers and has shifted the burden to the municipal sector. Recently, constraints have been experienced marketing glass bottles recovered in the Blue Boxes. Any shift from aluminum to steel soft drink containers will diminish revenues received by municipal recycling programs. A number of parties feel these and other constraints can be overcome by shifting towards greater use of re-usable containers. In addition, this form of enhanced re-use will be necessary to achieve the 50 percent diversion goal.

Encourage the Province to implement the greater use of returnable, re-usable containers and an accompanying deposit system. This would include:

- **Soft drink containers**
- **Wine and liquor containers; and**
- **Other food and beverage containers.**

Action: Ministry of the Environment

3.4 Material Re-use In Schools

The efforts to accelerate environmentally sound solid waste management in our schools, discussed previously in Section 2.4, should apply to material re-use as well as reduction.

Once in place, School Board recycling coordinators should work aggressively with teachers, custodial staff, administrative staff and parent-teacher associations to:

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- **implement measures for re-using materials in schools; and**
- **educate students on ways of re-using materials both at school and at home.**

Action: SWISC and Ministry of the Environment

3.5 In-House Public Sector Re-use Initiatives

Municipal and other government offices represent an important component of the commercial sector. They are well placed to set an example in the areas of reduction and re-use.

Complete implementation of a comprehensive in-house material re-use program amongst all municipal administrations and other public sector organizations and facilities within the Greater Toronto Area. Examples of specific measures include:

- **Requiring the use of dishes rather than disposable cups and plates;**
- **Photocopying and printing on both sides of paper;**
- **Printing on both sides of paper using laser and sheet-feeder computer printers (i.e., print out draft material on the back of paper that has already been used);**
- **Binding used computer printout into pads for use as note pads;**
- **Using both sides of other paper wherever possible; and**
- **Encouraging staff to identify other waste reduction and re-use opportunities.**

Action: Ministry of the Environment, All Regions and Area Municipalities

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3.6 by-laws to Promote Reduction and Re-use

In the longer term the various identified measures may not be sufficient to achieve the desired goals and additional regulations may be required. For example, if "fast food" outlets were to change from serving items for, "on premises consumption" in disposable containers to using re-usable dishes then the wastes from this sector would be greatly reduced.

As a further issue, the rate at which packaging is reduced may not be rapid enough and municipalities may wish to launch their own initiatives for reducing packaging more quickly.

Identify the alternatives, and investigate the feasibility of using municipal by-laws to promote reduction and re-use.

Action: SWISC

3.7 Educating the Private Sector

Numerous material re-use opportunities exist in the institutional, commercial and industrial sectors. All of the re-use examples listed for municipal administrations apply equally well to the office and commercial sectors. Creative employees throughout the private sector likely have ideas on re-using materials that make good bottom-line sense. Education and promotion represents an important mechanism for fostering this material re-use.

Promote material re-use in the work place as part of the overall educational and promotional programs.

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Initiate efforts to work with established industry, organizations and associations in promoting re-use.

Action: SWISC

3.8 Waste Exchange

Presently the Federal Government, ORTECH, Metro and several Regions within the Greater Toronto Area maintain information on materials available for re-use and actively promote the exchange of these items. The effectiveness of this re-use strategy is dependent upon the timely sharing of information on the materials available for exchange.

Expand programs to enhance the exchange of wastes within the Greater Toronto Area including:

- **Sharing on-line (via computers) information in various existing waste exchange databases;**
- **Identifying and enhancing key success factors in the exchange of waste; and**
- **Fostering the waste exchange by encouraging both the use of the exchange as a source of materials, and the listing of available materials.**

Action: SWISC

It should be noted that the Recycling Council of Ontario (RCO) is planning to explore this issue. The above initiatives should be initiated in cooperation with others working on this topic.

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3.9 Commercial/Industrial Waste Audits

A number of Regions presently offer boards, agencies, institutions and businesses an audit service to assist these organizations and enterprises in diverting their wastes. The performance of a waste audit by a qualified external staff or consultants will likely lead to the identification of additional waste reduction and re-use opportunities. In order to achieve a 50 percent diversion in the institutional, commercial and industrial sectors, a much more comprehensive private sector based waste audit approach will likely be required.

In the short term maintain the existing municipal government based waste audit services and examine mechanisms for implementing a large scale private sector based waste audit capability. Such an examination may include:

- **Identifying an appropriate group to potentially perform audits**
- **Establishing common definitions and material standards and**
- **Identifying an appropriate compliance mechanism.**

In the longer term it may be necessary to require all Commercial/Industrial generators to have a solid waste audit, performed by a qualified non-municipal group, as a condition for the disposal of their remaining solid wastes.

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4.0 RECYCLING

Recycling, the third "R", involves a broad range of systems and processes for diverting materials from disposal and transforming them into other useful items. Industrial enterprises, for many years, have recycled a broad range of materials because it made good economic sense to do so. Recently, most residents of the Greater Toronto Area have begun to recycle with support from the Municipal Recycling Support Program or more commonly referred to as the Blue Box program. In order to achieve our waste diversion goals a broad range of additional recycling programs will have to be introduced to capture more materials from our homes, institutions and work places.

4.1 Diversion of Organic Wastes

The next major step in diverting household waste will come through the collection, composting and marketing of household and yard organic materials. These include food wastes, grass clippings, leaves and other plant matter. To effectively divert this organic waste stream, the compost that is produced must be free of contaminants (such as those contained in household hazardous waste) and be of an acceptable quality. There are three main strategies for obtaining these organic materials. They include:

- The separate collection of a pure source separated organic waste stream (i.e., home owners would set out three types of materials; Blue Box recyclable, pure organics, and residue garbage).

- The separate collection of a source separated wet stream (i.e., residents would divide their wastes into two containers, one for wet and one for dry materials).

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- The mechanical separation of the organic waste fraction from the post Blue Box solid waste stream (i.e., residents would continue to separate out recyclable materials. The remaining solid waste would be taken to a resource recovery plant where the organic wastes would be mechanically removed along with other potentially recyclable materials).

Once the organic waste stream has been collected there are two main process alternatives. These include:

- In-vessel composting, and
- Windrow composting.

There are advantages, disadvantages and constraints associated with each of the three strategies for capturing the organic waste stream, and both of the compost production process alternatives. Some of the key issues are as follows:

- The separate collection of pure source-separated organic materials involves the expense of an additional collection yet it offers the greatest potential for yielding a high quality contaminant-free marketable compost.

- The two stream Wet/Dry approach requires expansion of the present collection of separated dry materials and the compost produced from the wet fraction may not be of acceptable quality for all applications. This approach would also require extensive education to ensure that hazardous materials are separated from the waste stream and that people classify their wastes into the two streams correctly. On the other hand, this approach requires only two collections and may lead to greater diversion.

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- With the mechanical separation of an organic fraction from the ordinary solid waste stream no change in current collection practice is required but the quality of the compost produced via such a process is highly questionable.

- One strategy alone may not be appropriate for the entire GTA:

  - The two stream Wet/Dry strategy may be successful in a smaller community where, through extensive education, most hazardous materials are removed from the waste stream and a compost suitable for controlled horticultural application is produced.

  - The mechanized separation of an organic fraction may be required in situations where separate collection and storage of organics is not feasible (e.g., in existing apartments).

- In the longer term the three stream or enhanced Blue Box plus the separate collection of organic waste may not achieve established diversion targets. In this case a form of supplemental mechanized resource recovery may be required.

- In response to the SWISC Request for Expression of Interest (REOI) call, no supplier has been able to cite a proven large scale system/process for the effective diversion of the organic waste stream.

Given this situation a number of full operational scale demonstrations are required to assess the various methods and to move towards the effective diversion of the organic waste stream.

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Undertake a program to demonstrate the separate collection and subsequent composting of the household organic waste stream. The demonstrations of composting should include both in-vessel and in-building windrow technologies from a range of qualified suppliers. Closely monitor system reliability, costs, quantity of diversion and compost quality/marketability. The composting facility should process between 10 and 200 tonnes per day.

Action: SWISC

SWISC supports Metro in its planned pilot program to collect organic materials from 10,000 homes and compost this material at the 50 tonne per day in-vessel Downsview facility.

SWISC supports the Region of Durham in its plan to collect organic materials from Oshawa (45,000 homes), Newcastle (12,800 homes) and some of the commercial sector. These materials will be composted in a 180 tonne/day in-vessel facility to be sited in the Region. The compost produced will be supplied to local farmers.

The Region of Halton is considering a 600 home pilot wet/dry program.

Ensure that any buildings and generic process elements of demonstration projects are designed to ensure maximum future flexibility and continued use within a long term waste management system.

Request that the Ministry of the Environment provide a delivery date for specifications of the minimum quality of composted material for various applications. These specifications should include both environmental and agricultural variables.

Action: Ministry of the Environment

SWISC

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4.2 Expansion of Blue Box Program

The Municipal Recycling Support Program which includes the Blue Box program and its variations such as the Blue Bags and Blue Bins for apartments are providing most residents with the opportunity to recycle. The emphasis should now be placed on:

- Improving the quality of the participation
- Increasing the coverage provided; and
- Increasing the number of materials collected.

The following table summarizes current activities while Tables 2.1, 2.2, 2.3 and 2.4 of Appendix A provide additional details on current activities.

Provide all residents within the GTA with the opportunity to recycle, on a regular basis, the current basic set of materials. This includes:

- **Newspaper**
- **Glass containers**
- **Metal cans**
- **Other aluminum such as foil and disposable aluminum pie plates**
- **PET (e.g., plastic soft drink bottles)**
- **Old corrugated cardboard**
- **Tires and**
- **White Goods**

Action: All Regions and Area Municipalities As required

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OVERVIEW OF CURRENT MUNICIPAL RECYCLING EFFORTS

	DURHAM	HALTON	METRO	PEEL	YORK
Newspapers					
Glass Containers					
Tin & Aluminum Cans					
PET Plastics Pop Bottles					
Mixed Plastics				P	
Old Corrugated Cardboard					
Phone Books				P	
Glossy Magazines					
Composting: Leaves					
Composting: Household Organics				P	
White Goods					
Tires					
Motor Oil					
Household Hazardous Wastes					

Mandatory Programs

Voluntary Programs

Pilot Programs P

No Current Programs

In addition to these basic materials the various SWISC participants and a number of their area municipalities are spearheading efforts to identify markets and add additional materials to their recycling programs. Unfortunately, market conditions are such that all communities cannot add these materials at this time.

In the medium term, as market constraints are overcome, all residents should be able to recycle additional materials which may include:

- **Plastics**
- **Clay coat (e.g., glossy magazines)**
- **Box board (e.g., cereal boxes)**
- **Fine Paper**
- **Other uncontaminated paper; and**
- **Phone books**

Action: Ministry of the Environment, All Regions and Area Municipalities

At present it is possible to separate up to four or five materials on existing recycling trucks. As more materials are added it will be necessary to commingle some materials on the trucks. These materials will require sorting at recycling centres.

Undertake pilot and demonstration programs to determine the most cost effective method of diverting an increased number of source separated materials.

Action: SWISC to coordinate

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Demonstrate a full scale material recovery facility for processing a commingled stream of recyclable materials.

Action: SWISC

SWISC supports Metro in their development of such a facility at the former Commissioners Street incinerator site.

In the medium term, to handle the increased number of materials, additional recycling vehicles will be required (coupled with fewer refuse collection vehicles) along with expanded or additional material recovery facilities.

Action: All Regions and Area Municipalities

4.3 Marketing of Recyclable Materials

The identification of stable markets for materials is the key to success for both existing and future recycling activities. To assist in this area, the Ministry of the Environment is looking to promote and fund commercial and institutional recycling of mixed papers, corrugated cardboard, boxboard, organic compost, and plastics not currently recycled. This should stimulate the creation of new recycling markets.

The Ministry of the Environment will continue to offer financial assistance to firms which recycle present and new materials.

To date the individual municipalities within the GTA have been responsible for marketing their own materials. By working cooperatively the municipalities could exert considerable influence in negotiating contracts and in managing the material supply risks associated with

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developing new processing capacity.

In the short term build upon existing and soon to be released composition and market studies to develop a clearer understanding of the supply/demand situation for materials that are presently recycled and those that will be recycled in the near future. Constraints and shortfalls in processing capacity should be clearly identified. In addition define the role and structure for a potential GTA-wide marketing resource. The output of this activity should be integrated with the "Strategic Road Map for Waste Minimization" commissioned by the Recycling Advisory Committee.

In the medium term, establish a marketing resource to provide marketing assistance to the communities within the GTA. The actions of this body should not hinder innovative local recycling initiatives nor impede recycling efforts elsewhere in the Province. Some of the activities of this resource may include:

- **Examining and suggesting enhancements to procurement policies**
- **Identifying other mechanisms for closing the recycling loop**
- **Negotiating large contracts to cover all the recyclable materials (e.g., glass) generated in the area**
- **Identifying research on new recycling opportunities**
- **Providing a GTA voice in negotiations with an organization such as Ontario Multi Material Recycling Inc. (OMMRI)**
- **Identifying requirements for changes in legislation.**

Action: SWISC

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4.4 Mandatory Residential Recycling

Although most residents within the Greater Toronto Area participate in recycling, the quality of the participation varies from time to time and there is a small minority of those serviced that do not participate. In addition, many residents of rental apartments and condos have been anxious to participate but some building owners have been hesitant to establish programs.

The Region of Halton recently instituted mandatory residential recycling and they estimate that their diversion rate increased from 18 to 23 per cent.

Experience has shown that mandatory residential recycling does not require extensive enforcement. Broad publicity can harness neighbourhood peer pressure to achieve compliance. Haulers can readily identify households that habitually fail to set out their Blue Box and appropriate warning letters can be sent out to these few households.

Encourage all municipalities within the Greater Toronto Area to make residential recycling mandatory.

Action: SWISC

4.5 Recycling In Schools

Opportunities in schools exist to recycle the current Blue Box materials and fine paper. If students and staff brought their lunches in reusable or recyclable containers, organic food wastes were collected for composting and the paper stream was recycled then wastes generated by our schools could be greatly reduced.

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Under the Student Action for Recycling (STAR) program the various School Boards are encouraged to establish recycling programs. Municipalities can generally pick up Blue Box materials and are eligible to receive STAR funding for collection vehicles if these collection vehicles are used exclusively to service schools. Municipalities are currently not in a position to collect and market fine paper while a range of private sector paper brokers do provide this service. It is therefore best, at this time, for Boards or individual schools to arrange for their own fine paper collection.

As noted previously some individual schools are anxious to recycle while the Boards, to which they belong, place a lower priority on this activity. This constraint can be overcome.

Revise the criteria for STAR program funding to permit municipalities to receive funding for recycling containers placed in their community schools.

Action: Ministry of the Environment

4.6 In-House Public Sector Recycling Initiatives

In addition to the reduction and re-use activities detailed in Sections 2.5 and 3.5, the Province's, municipalities and other public sector initiatives can also set an example for residents and the office/commercial sector in the area of recycling.

Specific measures to be implemented within the Greater Toronto Area include:

- **Recycle all Blue Box materials within public administrative buildings**
- **Recycle soft drink cans from arenas and other recreational facilities.**

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- **Institute an office fine paper recovery program in all municipal buildings**
- **Institute appropriate policies in line with Government Incorporating Procurement Policies to Eliminate Refuse (GIPPER) guidelines to procure materials with recycled content, and**
- **Promote the use of diverted material in municipal construction (e.g., use of glassphalt, clean demolition rubble).**

Action: Ministry of the Environment, All Regions and Area Municipalities

4.7 Recycling Construction and Demolition Wastes

Significant strides are being made in diverting these materials from disposal. First with the development of viable recycling alternatives followed by the ban of these materials at landfill, drywall and clean wood wastes will soon be diverted. The high tipping fee at disposal facilities has also lead to the diversion of most of the clean rubble generated in the area. In response to the need for responsible solid waste management, the Toronto Home Builders Association are developing an aggressive strategy as set out in their recent report, "Making a Molehill out of a Mountain".

In response to the SWISC Request for Expression of Interest (REOI) several submissions were received that address diversion in this sector.

Work with the Toronto Home Builders Association and other private sector organizations to implement additional measures for diverting construction and demolition wastes from disposal. Any research and development requirements should be identified. This process can be initiated through a

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series of workshops.

Action: SWISC

Proceed towards implementation of measures submitted in EOIs that address the diversion of construction and demolition wastes.

Action: SWISC

Investigate the implications of requiring the effective diversion of construction and demolition wastes as a condition for obtaining a permit for demolition or renovation activities.

Action: SWISC

4.8 Planning by-laws

Introducing recycling measures into existing buildings can be difficult as adequate space for material storage may not be available. In some cases implementation of a mandatory recycling requirement forces a building owner to contravene an existing by-law. For example the recent ban on the disposal of old corrugated cardboard (OCC) has caused some building owners to violate municipal by-laws regarding outside storage.

In the case of new construction, revisions can be made at the building design stage to incorporate recycling requirements. Metro has approached Canadian Standards Association (CSA) to establish appropriate standards for new construction.

Municipal recycling staff should work with municipal legal staff and planners to identify mechanism for revising existing by-laws in order to promote recycling efforts. Lessons learned should be shared across the GTA.

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The filing of an acceptable waste reduction, re-use and recycling plan coupled with a performance bond to assure implementation should be a condition of approval for all new development.

Action: Area Municipalities

4.9 Education on Commercial/Industrial Recycling

Overall broad educational and promotional efforts should encourage recycling efforts in the private sector. These messages must both raise awareness on the need to recycle and provide specific messages to individual target sectors.

Action: SWISC

4.10 Composting Commercial Sector Organics

Large quantities of organic wastes are generated by restaurants, institutional kitchens, and the food industry. These high quality organic wastes can be collected and composted.

SWISC supports Metropolitan Toronto and the Region of Durham in implementing and evaluating their pilot commercial organic waste collection and composting projects.

Action: Metro and Durham

4.11 Commercial Industrial Material Recovery Facility

In the longer term the various Reduction, Re-use and Recycling measures identified may not be sufficient to achieve the desired diversion and additional facilities may be required.

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In the longer term demonstrate the potential of a 200 to 400 tonne per day commercial/industrial material recovery facility.

Action: SWISC

4.12 Other Incentives and Mechanisms for the Private Sector

To date the primary mechanisms for fostering recycling efforts in the institutional, commercial and industrial sectors have been the imposition of a high tipping fee at disposal facilities and the banning of specific materials from disposal at area landfills. To-date bans are in place, or soon will be in place, for corrugated cardboard, tires, white goods, clean wood and drywall.

In order to achieve the established diversion targets, a continuation of efforts such as the following are required.

Work cooperatively with area Chambers of Commerce in introducing recycling programs.

Implement by-laws that target specific segments of the economy thus achieving a more gradual diversion of a material stream and providing markets with time to adjust (e.g., pass a by-law requiring companies with more than 500 employees to institute an office paper recycling program) then, at a later date, extend the by-law to smaller enterprises.

In general the strategy of banning material from landfill, once suitable recycling alternatives exist, should be continued.

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In the longer term banned materials may include:

- **Construction and demolition wastes**
- **Office fine paper**
- **Box board**
- **Plastics**
- **Commercial food wastes**
- **Other compostable organics; and**
- **Private sector Blue Box materials.**

Action: SWISC, All Regions

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5.0 OVERALL SUPPORT AND ADMINISTRATION

In addition to the Reduction, Re-use and Recycling initiatives detailed previously, a number of overall support and administrative initiatives are also required.

5.1 Monitoring Waste Diversion and Costs

To assess the performance of reduction, re-use and recycling programs and to allow for proper planning and control, it is important that monitoring and evaluation mechanism be in place. Although the overall diversion target of 50 percent by the year 2000 has been adopted, the more detailed definition of this target including the selection of a base year has not been formally specified as yet. Once the definition of the target has been established then progress in achieving this target must be monitored on an on-going basis. In the course of achieving the target, numerous programs will be implemented. The costs and effectiveness of these programs should also be monitored.

The Ministry of the Environment should present, for discussion, additional details on targets including: a target for the waste reduction component, a base year from which diversion will be measured and other details associated with mechanisms for monitoring diversion achievements.

Action: Ministry of the Environment

Establish a uniform, on-going system for monitoring both the individual quantities of various materials and the total quantities of materials diverted from landfill and incineration in the individual municipalities, the Regions, and the Greater Toronto Area. In parallel with these efforts the associated costs of programs should be monitored in a manner that relates specific

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costs to specific diversion achievements.

Action: SWISC

Tables 2.3, 4.2 and 5.2 of Appendix A provide the output of the first step in estimating the quantities diverted. The next step would involve a workshop on this issue directed at designing a monitoring the system.

5.2 Research and Development

It may be a role of SWISC to maintain a 3Rs program in the GTA that is constantly updated to state-of-the-art based on on-going monitoring of activities. In order to achieve this, there must be a mechanism for promoting or performing research and development.

In the longer term, consider, in cooperation with an organization such as a university, establish an on-going waste diversion research capability to serve the needs of the communities within the GTA.

Action: SWISC

5.3 Process for Instituting Disposal Facility Bans

As noted previously, landfill bans are a primary element of the current commercial/industrial 3Rs effort and will form an integral part of future initiatives. However, they must be implemented in a planned and consistent fashion.

Ensure environmentally acceptable recycling alternatives for materials are in place prior to banning them from disposal. Implement all bans in a

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coordinated fashion across the GTA.

Action: All Regions

The process for accomplishing this is in place through the on-going co-operational efforts of the SWISC participants.

5.4 Control of Wastes

A solid waste management system for achieving maximum waste diversion may require that specific waste streams be diverted to specific facilities in a way that may not represent the lowest cost, short term disposal option.

Appropriate legislation should be amended to ensure that the various waste streams can be directed to the appropriate facilities.

Action: SWISC

5.5 Producer Pay Based on Overall System Cost

The various participants in our economy pay for the management of their solid wastes in a variety of ways.

- Private sector waste haulers pay a tipping fee of $85 to $116 per tonne. These costs are then charged directly back to their private sector customers.

- Some Regions bill their area municipalities on a direct tonnage basis.

- Some Regions allocate costs on the tax basis but adjust the amount based on

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quantities disposed.

- Metro allocates solid waste management costs on the same basis as other costs, according to historically negotiated formulae where municipalities pay relative to their total assessment. This is changing to modified form of user pay formula.

- Property owners pay for solid waste management costs along with other general municipal services via their tax bill.

There are two direct aspects to "public sector producer pay":

i) The issue of Metro and the Regions directly charging all the area municipalities for waste disposal on a cost per tonne basis; and

ii) The issue of Metro, the Regions or the individual municipalities directly charging individual residents for solid waste disposal.

The absence of a public sector producer pay system has led to techniques such as diversion credits to foster recycling efforts. For individual householders there is little correlation between the quantity of waste produced and the cost of waste management.

All sectors of society should pay for the environmentally sound management of their solid waste.

SWISC supports the Region of Durham in undertaking its planned detailed investigation of the feasibility of a direct user pay system.

Action: Durham

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In addition the implications on directly charging area municipalities for waste disposal on a cost per tonne basis should be investigated.

In the longer term, institute a producer pay system for waste disposal based on an appropriate cost per tonne.

Action: SWISC

In addition to the above aspects of producer pay there is also the approach of placing the burden of ultimate disposal back on the producer, distributor or retailer of the item. Under this approach the cost of environmentally sound waste management would be built into the initial cost of items. Under such a strategy a price advantage could be offered to items offering significant re-use potential, recyclable products, and products containing recyclable materials.

In the longer term, undertake a more detailed investigation of incorporating waste management costs and 3Rs incentives into the initial price of items.

Action: SWISC

5.6 Feasibility of Long Term Storage

A number of interest groups have begun to advocate the long term storage of potentially recyclable materials. Commodity and scrap dealers often hold large inventories of materials for extended periods of time in anticipation of favourable movements in prices. The concept of stockpiling recyclable materials in anticipation of market or other constraints being overcome represents an extension of this established practice.

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Undertake a study to investigate the feasibility and implications of the long term storage of potentially recyclable materials.

Action: SWISC

5.7 Monitoring of Action Plan Implementation

At the outset of this Action Plan it was noted that work on initiating certain measures had begun while other activities required more detailed planning. Some activities have been identified for immediate implementation while others will be addressed over a longer time frame. Throughout the course of achieving the 50 percent diversion target this process of planning activities, monitoring, implementation and evaluating effectiveness will continue.

Monitor implementation of the Action Plan and monitor the effectiveness of the various diversion measures on an on-going basis.

The first review and reporting of progress is scheduled for September 1990.

Action: SWISC

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Appendix A

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APPENDIX A

Details on Existing Programs and Initiatives

All of the communities within the Greater Toronto Area are actively involved in promoting Reduction and Re-use.

This appendix provides a summary of the current recycling activities. To provide a basis of comparison the information is set out in tabular form. An overview of the contents of each of these tables follows.

Table 1.1, Program Jurisdiction, provides an overview of the areas of responsibility of the Regions and Municipalities.

Table 1.2, Municipal Contact, indicates the staff who are responsible for recycling programs at both the regional; and municipal levels (where efforts are not closely coordinated by the upper tier government).

Table 1.3, Participants in Initial 3Rs Action Plan Workshops, lists the individuals together with their affiliation who attended one or more of the initial workshops during which the Action Plan was formulated.

Table 2.1, Regular Residential Program: Materials and Coverage, shows the materials currently collected by the Regions or Municipalities. Those materials that may be collected on a regular basis include: news, glass, cans, PET, OCC (old corrugated cardboard), motor oil, white goods, and other materials. A few of the municipalities indicated that some materials are the subject of a pilot study program.

Collection of these goods cover different types of residences such as: urban, townhouses, apartments, and rural. These collections may be all the time, some of the time or

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residents may be required to take their items to a depot.

Table 2.2, Special Residential Program: Materials and Coverage, shows the materials that are collected on a special basis as a result of seasonal (e.g. fall leaves), size of material (white goods) or the non standard method of collection. These materials include: fall leaves, christmas trees, brush, white goods, household hazardous material, motor oil, and other materials indicated. This table also shows the coverage of the collection of these materials.

Table 2.3, Regular Residential Program Quantities, shows the amount of materials collected on a regular basis. These quantities are to some extent estimates as some municipalities have operated a Blue Box collection program for a short period of time and do not have a sound database as yet. Some municipalities collect commingled materials and it is difficult to separate the quantities into individual totals. These quantities are in tonnes. Sub-totals per region are provided along with the total for the entire GTA.

Table 2.4, Regular Residential Program Markets, indicates who receives the materials once the recylclables have been collected. These materials are generally marketed by the individual municipalities to the same companies such as; glass to Consumers Glass, and news to Quebec and Ontario Paper.

Table 3.1, Schools: Materials, Coverage and Funding Status, illustrates the degree that schools, both public and separate, participate in recycling. The Blue Box material collected, including news, cans, glass, and PET are indicated along with fine paper collection.

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Table 3.2, Schools: Contractor, shows the contractor that collects the recyclables from the schools. The contractors that collects the Blue Box materials are generally the same contractor who collects the materials for the municipality whereas the contractors that collect the fine paper may be a paper dealer or the School Board themselves.

Table 4.1, Construction and Demolition Wastes, illustrates the materials that are collected from the construction and demolition industry. These materials include: waste wood, dry wall, construction rubble, and asphalt/concrete. Although the Region or Municipality does not collect these materials they may be involved to varying degrees when these materials are banned from landfills.

Table 4.2, Construction and Demolition Wastes Quantities, presents the available estimates of the quantities of these materials that are diverted. As shown in the table, these estimates are generally not available.

Table 4.3, Construction and Demolition Wastes Markets, presents the limited amount of information available on the markets for these materials.

Table 5.1, Commercial and Industrial Materials, shows the materials that are diverted from the commercial and industrial sectors of the Regions and municipalities. The municipalities generally do not collect from private industry since the generator must arrange to divert these materials on a private collection basis. The Region becomes involved when providing waste audits and when bans are enforced. The materials being diverted include: OCC, fine paper, plate glass, container glass, tires, oils, solvents, drums, metal, plastics, rubber and textiles.

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Table 5.2, Commercial and Industrial Quantities, presents the available estimates on the amount of materials diverted (in tonnes) from the commercial and industrial sectors. In general, this quantitative information on private sector activity is generally not available.

Table 5.3, Commercial and Industrial Materials Markets, presents the available information on the markets for the commercial and industrial materials. Most of the materials diverted have diverse markets.

Table 6.1, Materials Banned From Landfill Sites, indicated the specific materials that are not allowed to be disposed of in landfills. These bans are enforced by Metro and the Regions. In some cases are municipalities have responded to the upper tier disposal ban by employing local by-laws to ban residential collection of the materials.

Table 6.2, Audits and Tipping Fees, shows which jurisdictions offer a form of waste audit service and lists the current disposal fees charged at area disposal facilities.

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Table 1.1

Program Jurisdiction

Region	Municipality	Residential Sector Collection	Educational Sector Collection	Commercial & Industrial Sector
DURHAM	.Region of Durham	Y	N	Y
	City of Oshawa	N	N	Region
	Town of Ajax	N	N	Region
	Town of Newcastle	N	N	Region
	Town of Pickering	N	N	Region
	Town of Whitby	N	N	Region
	Township of Brock	N	N	Region
	Township of Scugog	N	N	Region
	Township of Uxbridge	N	N	Region
HALTON	.Region of Halton	Y	N	Y
	City of Burlington	N	N	Region
	Town of Halton Hills	N	N	Region
	Town of Milton	N	N	Region
	Town of Oakville	N	N	Region
METRO	.Metro Toronto	N	N	Y
	Borough of East York	Y	N	Metro
	City of Etobicoke	Y	N	Metro
	City of North York	Y	N	Metro
	City of Scarborough	Y	N	Metro
	City of Toronto	Y	N	Metro
	City of York	Y	N	Metro
PEEL	.Region of Peel	N	Y	Y
	City of Brampton	Y	N	Region
	City of Mississauga	Y	N	Region
	Town Of Caledon	Y	N	Region
YORK	.Region of York	Area Mun	Area Mun	Area Mun
	Town of Aurora	Y	N	N
	Town of East Gwillimbury	Y	Y	Y
	Town of Georgina	Y	N	N
	Town of Markham	Y	Y	Y
	Town of Newmarket	Y	Y	N
	Town of Richmond Hill	Y	N	N
	Town of Vaughan	Y	N	N
	Township of King	Y	N	N
	Whitchurch-Stouffville	Y	N	N

Note: Y=Yes, N=No

Table 1.2
Municipal Recycling Contacts

Region	Municipality	Contact Person 1	Contact Person 2	Phone Number	Fax Number
DURHAM	.Region of Durham	Ken Donnelly	Glenn Pleasance	668-7721	668-2051
	City of Oshawa			725-7351	
	Town of Ajax				
	Town of Newcastle			623-3379	
	Town of Pickering			683-2760	
	Town of Whitby			668-5803	
	Township of Brock			705-432-2681	
	Township of Scugog			985-7346	
	Township of Uxbridge			852-9181	
HALTON	.Region of Halton	John MacKay	Vicki Henderson	827-2151	827-3660
	City of Burlington			335-7777	
	Town of Halton Hills			877-5185	
	Town of Milton			878-7211	
	Town of Oakville			845-6601	
METRO	.Metro Toronto	Bill Crowther	Tim Michael	392-8256	392-4501
	Borough of East York	Cathy Killinger		461-9451 ext544	
	City of Etobicoke	Henry Mohlmann		394-8000	
	City of North York	John Nick		224-6227	
	City of Scarborough	Debra Dale		396-5205	
	City of Toronto	Kevin Wylie		392-7742	
	City of York	John McNamara		394-2599	
PEEL	.Region of Peel	Glen Milbury	Jane Rowbotham	566-1511	566-8955
	City of Brampton	Scott Stewart	Alex MacMillan	793-4110	458-7372
	City of Mississauga	Wes Vinter		270-8170	566-4183
	Town Of Caledon	Dawn Moffatt		584-2273	857-7217
YORK	.Region of York	Neil Embree		884-1611	895-3047
	Town of Aurora	Janet Wright		727-1375 ext273	841-7119
	Town of East Gwillimbury	Leslie Ritchie	Jack Hopkins	478-4282	478-2808
	Town of Georgina	Joanne Carr	Robert Magloughlen	476-4301	476-8100
	Town of Markham	Jeanette Anbinder	Neil Mortson	475-4706	940-1550
	Town of Newmarket	Linda Dean	Robert Prentice	895-5193 ext301	895-6004
	Town of Richmond Hill	Frank Bailie		884-8013	884-0395
	Town of Vaughan	Ed Simmons	Ti Parry	889-9211	832-8535
	Township of King	Kevin Young		833-5321	833-2300
	Whitchurch-Stouffville	Paul Whitehouse		640-1900	640-7957

TABLE 1.3

PARTICIPANTS IN INITIAL 3Rs ACTION PLAN WORKSHOPS

NAME		AFFILIATION
Ken	Donnelly	Region of Durham
Glen	Pleasance	Region of Durham
Vicki	Henderson	Halton Region
John	MacKay	Halton Region
Bill	Crowther	Metro Toronto
Tim	Michael	Metro Toronto
Mary	Stewart	Metro Toronto
Kevin	Jones	Metro Toronto
Jane	Rowbotham	Region of Peel
Scott	Stewart	City of Brampton
Wes	Vinter	City of Mississauga
Dawn	Moffet	Town of Caledon
Neil	Embree	Region of York
Leo	Grellette	Town of Aurora
Leslie	Ritchie	Town of East Gwillimbury
Joanne	Carr	Town of Georgina
Jeanette	Anbinder	Town of Markham
Linda	Dean	Town of Newmarket
Frank	Bailie	Town of Richmond Hill
Ed	Simmons	Town of Vaughan
Paul	Whitehouse	Town of Whitchurch-Stouffville
Barbara	Johnston	Coopers and Lybrand
Lou	Pagano	G.I.P.P.E.R.
Joanna	Kidd	Lura Group
Joan	Phillips	Mississauga Clean City Campaign
Robert	Dormer	Ministry of the Environment Approvals Branch
Dan	Ionescu	Ministry of the Environment Waste Management Branch
Jill	Dunkley	Recycling Council of Ontario
Glenn	Munroe	Recycling Advisory Committee
Wendy	Cook	Recycling Advisory Committee
Dave	Merriman	MacViro Consultants Inc.
Marc	Clark	MacViro Consultants Inc.
Karen	Miles	MacViro Consultants Inc.

Table 2.1
Regular Residential Program: Materials & Coverage

Region	Municipality	Materials										Coverage			
		News	Glass	Cans	PET	Plastics	OCC	Motor Oil	White Goods	Other 1	Other 2	Urban	Town Houses	Apart	Rural Resid
DURHAM	.Region of Durham	Y	Y	Y	Y	D	D	D	D	Clothes -D	Propane -D	M	M	S	N
HALTON	.Region of Halton	Y	Y	Y	Y	M	Y	D	D			A	A	A	D
METRO	Borough of East York	Y	Y	Y	Y	Y	Y	D	Y			A	A	S	na
	City of Etobicoke	Y	Y	Y	Y	Y	Y	D	Y			A	A	S	na
	City of North York	Y	Y	Y	Y	Y	Y	D	Y			A	A	M	na
	City of Scarborough	Y	Y	Y	Y	Y	Y	D	Y			A	A	S	na
	City of Toronto	Y	Y	Y	Y	Y	Y	D	Y			A	A	M	na
	City of York	Y	Y	Y	Y	Y	Y	D	Y			A	A	S	na
PEEL	City of Brampton	Y	Y	Y	Y	M	D	M	M			A	A	June 90	A
	City of Mississauga	Y	Y	Y	Y	Y	D	M	Y			A	A	S	A
	Town Of Caledon	Y	Y	Y	Y	M	M	M	M			A	na	M	A
YORK	Town of Aurora	Y	Y	Y	Y				D						
	Town of East Gwillimbury	Y	Y	Y	Y	M	M	Y	M			A	na	M	A
	Town of Georgina	Y	Y	Y	Y	M	M	M	M			A	A	P	A
	Town of Markham	Y	Y	Y	Y	P	M	M	Y			A	S	S	A
	Town of Newmarket	Y	Y	Y	Y	M	M	M	Y			A	A	S	A
	Town of Richmond Hill	Y	Y	Y	Y	M	Y	Y	Y			A	A	S	A
	Town of Vaughan	Y	Y	Y	Y	M	M	D	Y			A	A	M	M
	Township of King														
	Whitchurch-Stouffville	Y	Y	Y	Y	M	D	M	D			A	A	M	A

NOTE: Y=Yes, P=Pilot,D=Depot Only, N=No, A=All, M=Most, S=Some
na=Not Applicable

Table 2.2
Special Residential Program: Materials & Coverage

Region	Municipality	Materials: Leaves	Christmas Trees	Brush	White Goods	Household Hazardous	Motor Oil	Special Other 1	Special Other 2	Coverage: Urban	Town Houses	Apart	Rural Residents
DURHAM	.Region of Durham	Y	Y	D	D	D	D	Tires-D	Batteries-D	M	D	D	D
HALTON	.Region of Halton	N	N	N	D	D	D			D	D	D	D
	City of Burlington	S	Y	S	S	N	N						
	Town of Halton Hills	N	N	N	S	N	N						
	Town of Milton	S	Y	S	S	N	N						
	Town of Oakville	Y	Y	Y	S	M	N						
METRO	Borough of East York	Y	Y	S	Y	Y	D			A	A	S	
	City of Etobicoke	Y	Y	S	Y	Y	D			A	A	S	
	City of North York	Y	Y	S	Y	Y	D			A	A	S	
	City of Scarborough	Y	Y	S	Y	Y	D			A	A	S	
	City of Toronto	Y	Y	A	Y	Y	D			A	A	S	
	City of York	Y	Y	S	Y	Y	D			A	A	S	
PEEL	City of Brampton	Y		N	N	D				A	A	S	A
	City of Mississauga	Y	Y	Y	Y	D	D	Phone Books	Compost	A	M	M	A
	Town Of Caledon	P	Y	N	Y	N	N			N	N	N	N
YORK	Town of Aurora (1)	Y			Y					A	na	N	
	Town of East Gwillimbury	N	Y	Y	Y	N	D			A	na	N	A
	Town of Georgina	Y	N	N	Y	N	N			A	A	N	M
	Town of Markham	Y	Y	Y	Y	N	N	N	N	A	A	A	A / D
	Town of Newmarket	Y	Y	N	Y	N	N			A	A	S	A
	Town of Richmond Hill	D	D	D	D	N	Y			A	A	S	S
	Town of Vaughan	Y	Y	Y	Y	D	D			Y	Y	N	Y
	Township of King (1)												
	Whitchurch-Stouffville	Y	Y	Y	Y	N	N			A	A	A	A

(1) Curbside collection due to start in spring of 1990

NOTE: Y=Yes, P=Pilot, D=Depot Only, N=No, A=All, M=Most, S=Some
na=Not Applicable

Table 2.3
Regular Residential Program Quantities
(Tonnes)

Region	Municipality	News	Glass	Cans	PET	Plastic	OCC
DURHAM	.Region of Durham	11,276.0	1,724	1,971.0	with cans		227.0
Total:		11,276.0	1,724	1,971.0	0.0	0.00	227.0
HALTON	.Region of Halton	16,000.0	4,500	2,500.0	50.0		200.0
Total:		16,000.0	4,500	2,500.0	50.0	0.00	200.0
METRO	.Metro Toronto	42,794.0	4,466	3,209.0	with cans		with news
Total:		42,794.0	4,466	3,209.0	0.0	0.00	0.0
PEEL	.Region of Peel						
	City of Brampton	6,879.0	696	292.0	5.0		200.0
	City of Mississauga	12,136.0	1,934	857.0	88.0	with PET	60.0
	Town Of Caledon	1,000.0	400	500.0	10.0		
Total:		20,015.0	3,030	1,649.0	103.0	0.00	260.0
YORK	Town of Aurora (1)						
	Town of East Gwillimbury	815.5	219	9.2	3.8		
	Town of Georgina	559.0	184	176.5	3.7		
	Town of Markham	6,096.0	1,340	573.0	24.0		
	Town of Newmarket	1,122.0	305	114.0	3.0		
	Town of Richmond Hill	2,007.0	610	229.0	9.6		2.3
	Town of Vaughan (2)						
	Township of King (1)						
	Whitchurch-Stouffville	633.0	178	71.0	3.0		
Total:		11,232.5	2,836	1,172.7	47.1	0.00	2.3
Total:		101,317.5	16,556	10,501.7	200.1	0.00	689.3

(1) Curbside Collection due to start in spring of 1990

(2) Quantity records not maintained

Table 2.4
Regular Residential Program Markets

Region	Municipality	Materials: News	Glass	Cans	PET	Plastics	OCC	Motor Oil	White Goods
DURHAM	.Region of Durham	Q & O	C G	Alcan	TwinPak		Atlantic Packaging	CANAM	Lasco Steel
HALTON	.Region of Halton	Q & O	C G	Alcan/Canadian Tinplate	TwinPack		diverse	Disposed	Waxmen
METRO	.Metro Toronto	Q & O	C G	Canadian Tin Plate	TwinPak	Domtar	Atlantic Pkg		
PEEL	.Region of Peel						IG Machine & Fibres	Safety Kleene/Can-Am	
	City of Brampton	Q & O	C G				IG Machine & Fibre		
	City of Mississauga	Q & O	C G	Stelco	Superwood	Superwood			USARCO
	Town Of Caledon	M D	C G /MCRI	Alcan/Canadian Tinplate	TwinPak	TO Ontario Paper			
YORK	Town of Aurora	Markham	Markham	Markham	Markham	Markham			
	Town of East Gwillimbury	R H	R H	R H	R H				Contractor-Inland
	Town of Georgina	Q & O	C G	Stelco/Alcan	Twinpak				Contractor
	Town of Markham	Q & O	C G	Stelco/Alcon	Twin Pak	Domtar			
	Town of Newmarket	R H	R H	R H	R H				
	Town of Richmond Hill	Q & O	C G	Metal Recovery Ind.	TwinPak		Domtar	Oil Canada	Inland Marine
	Town of Vaughan	Q & O	C G	Stelco/Alcan	Twin Pak	Domtar			Scrap Yard
	Township of King								
	Whitchurch-Stouffville	R H	R H	R H	R H				

Q & O =Quebec & Ontario Paper C G =Consumers Glass
R H =Richmond Hill Markets

Table 3.1
Schools: Materials, Coverage & Funding Status

Region	Municipality	Blue Box Mat.				Fine Paper				STAR Program Funding Status
		Public Primary	Public Secondary	Separate Primary	Separate Secondary	Public Primary	Public Secondary	Separate Primary	Separate Secondary	
DURHAM	.Region of Durham	S	S	S	S	S	S	S	S	N
HALTON	.Region of Halton	S	S	S	S	S	S	S	S	N
METRO	.Metro Toronto	A	A	A	A	S	S	S	S	Applied For
PEEL	.Region of Peel	M	S	M	S	S	S	S	S	Applied For-Both boards have formed a joint recycling committee
	City of Brampton	M	M	M	M	S	S	S	S	Applied For-Both boards have formed a joint recycling committee
	City of Mississauga	Y	N	Y	N	N	S / P	N	N	CJRC is applying
	Town Of Caledon	A (1990)	A (1990)	A (1990)	A (1990)	BRD	BRD	BRD	BRD	Y
YORK	Town of Aurora	M	N	N	N	N	N	N	N	M
	Town of East Gwillimbury	M	na	N	M	N		N	N	M
	Town of Georgina	A	A	A		N	N	N		Application to be made by boards (STAR)
	Town of Markham	A	A	A	A	M	M	S	S	Applied For
	Town of Newmarket	A	A	A	A	N	N	N	N	N
	Town of Richmond Hill	A	A	M	A	A	A	M	S	M
	Town of Vaughan	M	N	N	N	N	N	N	N	N
	Township of King									
	Whitchurch-Stouffville	A	A	A		N	N	N		N

NOTE: Y=Yes, P=Pilot, N=No, A=All, M=Most, S=Some, BRD=School

Table 3.2
Schools: Contractor

Region	Municipality	Blue Box Contractor				Fine Paper			
		Public Primary	Public Secondary	Separate Primary	Separate Secondary	Public Primary	Public Secondary	Separate Primary	Separate Secondary
DURHAM	.Region of Durham	DRC	DRC	DRC	DRC	DRC	DRC	DRC	DRC
HALTON	.Region of Halton	HRR	HRR	HRR	HRR	HRR	HRR	HRR	HRR
METRO	.Metro Toronto	Municipal	M / Private	M	M / Private	B		B	
PEEL	.Region of Peel					Lenco	Lenco	Lenco	Lenco
	City of Brampton	Laidlaw	Laidlaw	Laidlaw	Laidlaw	Lenco	Lenco	Lenco	Lenco
	City of Mississauga	Laidlaw	CJRC	Laidlaw	CJRC		CJRC		CJRC
	Town Of Caledon	Sandhill Disposal	Sandhill	Sandhill Disposal	Sandhill	BRD	BRD	BRD	
YORK	Town of Aurora	M W S	M W S						
	Town of East Gwillimbury								
	Town of Georgina	Larue Ent.	Larue Ent.	Larvu Ent.					
	Town of Markham	M W S	M W S	M W S	M W S	BRD	BRD	BRD	BRD
	Town of Newmarket	York Sanitation	York Sanitation	York Sanitation	York Sanitation				
	Town of Richmond Hill	M W S	M W S	M W S	M W S	M W S	M W S	M W S	M W S
	Town of Vaughan	M	M	M	M				
	Township of King								
	Whitchurch-Stouffville	M W S	M W S	M W S					

M W S=Miller Waste System DRC=Durham Recycling Centre
HRR =Halton Recycled Resources Ltd.
BRD =School Board

Table 4.1
Construction & Demolition Wastes

Region	Municipality	Waste Wood	Dry Wall	Construction Rubble	Asphalt/Concrete
DURHAM	.Region of Durham	S	N	S	S
HALTON	.Region of Halton	N	A	N	N
METRO	.Metro Toronto	S	S	S	M
PEEL	.Region of Peel	M	M	M	M
YORK	Town of East Gwillimbury	N	N	N	N
	Town of Markham	N	N	N	N

Note:A=All, M=Most, S=Some, L=little, P=Pilot, N=None

Table 4.2
Construction & Demolition Wastes Quantities
(tonnes)

Region	Municipality	Waste Wood	Dry Wall	Construction Rubble	Asphalt/Concrete
DURHAM	.Region of Durham			0	
Total:		0	0	0	0
HALTON	.Region of Halton				
Total:		0	0	0	0
METRO	.Metro Toronto	3,750			
Total:		3,750	0	0	0
PEEL	.Region of Peel	32,000			625
Total:		32,000	0	0	625
YORK	Town of East Gwillimbury Town of Markham				
Total:		0	0	0	0
Total:		35,750	0	0	625

Note: Quantities generally not available

Table 4.3
Construction & Demolition Wastes Markets

Region	Municipality	Waste Wood	Dry Wall	Construction Rubble	Asphalt/Concrete
DURHAM	.Region of Durham	Metro Marketing Directory		Recycled	Recycled
HALTON	.Region of Halton		NewWest Gypsum		
METRO	.Metro Toronto	D	D	D	
PEEL	.Region of Peel	WCI / D	D	D	D
YORK	Town of East Gwillimbury				
	Town of Markham				D

D =Diverse, WCI =Waste Conversion Inc.

Table 5.1
Commercial & Industrial Materials

Region	Municipality	Materials Collected: OCC	Fine Paper	Plate Glass	Container Glass	Tires	Oils	Solvents	Drums	Metal	Plastics	Rubber	Textiles
DURHAM	.Region of Durham	S	S	S	S	S	S	L	S	S	S	S	S
HALTON	.Region of Halton	S	M	N	S	N	N	N	N	N	N	N	N
METRO	.Metro Toronto	M	M	S	S	S	S	S	S	M	S	S	S
PEEL	.Region of Peel	S	S	L	S	A	A	A	A	S	S	L	N
YORK	Town of East Gwillimbury	N	N	N	N	N	N	N	N	N	N	N	N
	Town of Markham	N	N	N	S	N	N	N	N	N	S	N	N

Note:A=All, M=Most, S=Some, L=little, P=Pilot, N=None

Table 5.2
Estimated Commercial & Industrial Materials Quantities
(tonnes)

Region	Municipality	Materials													
		OCC	Fine Paper	Plate Glass	Container Glass	Tires	Oils	Solvents	Drums	Metal	Plastics	Rubber	Textiles	Other 1	Other 2
DURHAM	.Region of Durham	12,000		0											
Total:		12,000	0	0	0	0	0	0	0	0	0	0	0	0	0
HALTON	.Region of Halton	10,000	600												100
Total:		10,000	600	0	0	0	0	0	0	0	0	0	0	0	100
METRO	.Metro Toronto	33,000	5,200								100			250	10,000
Total:		33,000	5,200	0	0	0	0	0	0	0	100	0	0	250	10,000
PEEL	.Region of Peel	38,000	1,000	2	15	2,300				5	250		30	2,300	8,500
Total:		38,000	1,000	2	15	2,300	0	0	0	5	250	0	30	2,300	8,500
YORK	Town of East Gwillimbury Town of Markham														
Total:		0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total:		93,000	6,800	2	15	2,300	0	0	0	5	350	0	30	2,550	18,600

Note: Quantities generally not available

Table 5.3
Commercial & Industrial Materials Markets

Region	Municipality	OCC	Fine Paper	Plate Glass	Container Glass	Tires	Oils	Solvents	Drums	Metal	Plastics	Rubber	Textiles
DURHAM	.Region of Durham	Atlantic Packaging	Recycled	Harden & King	Recycled	Achiever Tire	D	D	D	D	D	D	D
HALTON	.Region of Halton	D	D		Consumers Glass								
METRO	.Metro Toronto	D	D			Achiever Tire							
PEEL	.Region of Peel	D	D	D	Consumers Glass	Achievor Tire	D	D	D	D	D	D	D
YORK	Town of East Gwillimbury Town of Markham												

D =Diverse, N =None

Table 6.1
Materials Banned From Landfill Sites and From Municipal Collection

Region	Municipality	Tires	OCC	Dry Wall	Lumber	Fall Leaves	White Goods	Fine Paper	Const & Demo	Other 1
DURHAM	.Region of Durham	Y	Y	P	N	Y	Y	N	N	
	City of Oshawa									
	Town of Ajax									
	Town of Newcastle									
	Town of Pickering									
	Town of Whitby									
	Township of Brock									
	Township of Scugog									
	Township of Uxbridge									
HALTON	.Region of Halton	Max 5/Load	Y	Y	N	N	Y	N	N	Blue Box Mat
	City of Burlington									
	Town of Halton Hills									
	Town of Milton									
	Town of Oakville									
METRO	.Metro Toronto	Y	Y	P	N	Y	Y	N	N	
	Borough of East York									
	City of Etobicoke									
	City of North York									
	City of Scarborough									
	City of Toronto									
	City of York									
PEEL	.Region of Peel	Y	Y	Y	Y	N	N	N	N	
	City of Brampton	Y	Y	Y	Y	N	N	N	N	
	City of Mississauga	Y	Y	Y	Y	N	Y	N	N	
	Town Of Caledon	Y	Y	Y	Y	N	N	N	N	
YORK	.Region of York									
	Town of Aurora									
	Town of East Gwillimbury									
	Town of Georgina	N	N	Y	N		N	N	Y	Stumps, logs
	Town of Markham	Y	Y	Y	N	Y	Y	N	Y	
	Town of Newmarket	N	N	N	N	Y	Y	N	N	
	Town of Richmond Hill									
	Town of Vaughan	N	Y	N	N	Y	N	N	N	
	Township of King									
	Whitchurch-Stouffville	N	N	Y	N	Y	Y	N	N	

Note: Y=Yes, N=No

Table 6.2
Audits & Tipping Fees

Region	Municipality	Waste Diversion Audit Service	Landfill Tipping Fee	Transfer Station Tipping Fee
DURHAM	.Region of Durham	Y	$83.00	
HALTON	.Region of Halton	N		$116.00
METRO	.Metro Toronto	Y	$97.50	$115.00
PEEL	.Region of Peel	Y	$90.00	
	City of Brampton	Y by Region of Peel	$90.00	
	City of Mississauga	by Region of Peel		
	Town Of Caledon		$90.00	
YORK	Town of Aurora			
	Town of East Gwillimbury	N	$85.00	
	Town of Georgina	N	50 -125 (vehicle size)	
	Town of Markham	N		
	Town of Newmarket	N		
	Town of Richmond Hill	N		
	Town of Vaughan	N		
	Township of King			
	Whitchurch-Stouffville	N	$83.33	

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Appendix B

SWISC

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REPORT TO

SOLID WASTE INTERIM STEERING COMMITTEE

CITIZENS' WORKING GROUP
ON
3RS ACTION PLAN
MARCH 24, 1990

LURA GROUP

PRINTED ON RECYCLED PAPER

I INTRODUCTION

As a result of comments received at the first round of public meetings, and at consultation meetings with special interest groups during phase I of the public consultation program, SWISC undertook to develop a strategy and action plan for waste diversion. The specifics of SWISC's undertakings are set out in the December 5, 1989 document, Response to Issues Raised in the Public Consultation Program, October to November, 1989.

The purpose of the March 24, 1990 workshop was to review the draft 3Rs Action Plan which MacViro Consultants Inc., had prepared, and to obtain citizens' input on the draft plan. A total of 23 citizens attended the workshop representing several non-governmental organizations, citizens' groups and individuals-at-large. All had extensive previous involvement in waste management issues. There was a lively discussion of every section of the draft Action Plan.

The meeting was held in the Territories Room of the Royal York Hotel in Toronto. The meeting convened at 9:00 a.m. and was adjourned at 4:00 p.m.

At the outset and conclusion of the meeting there was a discussion of the general principles that should guide the Action Plan, and of the format of the plan. These matters are reported on first in this report, followed by the detailed comments on each section of the Action Plan.

Also at the outset, there was a general discussion around the political genesis and rationale of SWISC. The participants expressed their concern that their time would be well spent, and that SWISC and the Regional governments would take their recommendations seriously, and act with a sense of great urgency.

II KEY ISSUES AND PRINCIPLES

- Wherever feasible, waste processing and disposal facilities should be sited within the waste producing community.

- Siting of facilities should also respect environmentally sensitive areas. In this respect, reference should be made to the Kanter Greenlands Strategy and the associated GTA Greenlands Legacy Map produced by Glen Schnarr & Associates.

- Removing hazardous wastes from the various waste streams is a top priority, which must be achieved before much progress can be made on other actions

- Reduction needs more emphasis.

- All actions should be evaluated and given preference if they can demonstrate that:
  - they promote, or at least do not create barriers to moving the waste handling upwards through the 3Rs ;hierarchy;
  - they further local communities taking responsibility for their wastes;
  - they serve a community awareness and educational role.
- Community should be defined as an organized, local municipality.

- Education is an urgent priority and targeted to the appropriate producers.

- There should be a mechanism for local review of education messages to ensure compatibility with local grass roots programs.

- There should be a broader focus on all waste producers in society -- the plan seems to concern itself primarily with the municipally administered waste streams

III REPORT FORMAT/PUBLIC MEETINGS

- The report needs an executive summary for politicians' consumption
- It needs to be jazzed up, made less boring. Use cartoons, case histories in sidebars, etc.
- There needs to be some cross referencing of Actions to Waste Stream to Waste Production -- maybe in matrix form.
- Graphically emphasize the section of Reduction.
- Let regional PLC or SWEAP people introduce you at the public meetings in May.
- Provide handout information on Reduction at public meetings.

IV ACTION PLAN

The following comments relate specifically to the draft Action Plan, organized by section of the plan as numbered.

2.0 REDUCTION

2.1 Reduction on In-House Reduction

- municipalities should conduct grass roots programs
- SWISC should just refine the work done by SWEAP and the other Regions -- don't waste time and money.

- URGENCY -- an immediate launch to this action is essential.

2.2 SWISC Support for Reduced packaging

- Explore avenues open to local municipalities to ban excess packaging or substances, or otherwise enforce/promote waste reduction (e.g. see Minneapolis By-Law)

- SWISC should be aware that Environment Action Ontario will be approaching the Province, GTA and other municipalities to enforce or promote the following targets:

  a) fast-food restaurants should provide re-useable dishes and cutlery for sit-down customers;
  b) the province should impose a tax on take-out containers, the revenues from which should be dedicated to waste reduction efforts.

- Again, specify that municipalities conduct grass roots programs.

- Send a strong message to senior levels of government to move on this issue quickly.

2.3 Waste Reduction in Schools

- Don't just "raise priority of waste reduction initiatives", make 3Rs mandatory in all schools; a Ministry of Education directive.

- STAR program is inadequate. Determine what level of funding is needed to do a proper job, and build it into regular grant funding structure of the schools. strengthen 3Rs in education curriculum and enable schools to utilize 3Rs

program as hands-on educational experience for students. Teach importance of waste reduction.

2.4 Household Hazardous Waste Reduction

- First priority is to get Household Hazardous Waste out of the waste streams.
- Regulation 309 presents various barriers to HHW handling options.
  - definition of hazardous wastes is important. May need various categories.
- Education and labelling are critical to success of this component and the entire 3Rs program.
- handling the Hazardous medical waste problematic too. Should be specifically identified and addressed.

2.5 Waste Reduction Through Home Composting

- There should be more emphasis given to the need to expand home composting to the entire community, beyond the committed few.
- Need to monitor and evaluate any results of community-wide home composting efforts.
- Composting is a recycling technology.

2.6 Waste Reduction in the Private Sector

- Again, all educational efforts must be specifically targeted to industries, perhaps through industry associations.

- If voluntary targets are not met by the private sector, then it should be made clear that targets will be set by legislation or regulation.

- Implement a tax on disposable containers.

- Specify the private sector as Institutional/Commercial/Industrial.

- We should expand the Packaging Protocol approach of CCREM to include industrial processes as well, i.e. reduce materials use wherever possible.

3.0 MATERIAL RE-USE

3.1 Education on In-House Re-use of Materials

- Re-use and Reduction must be promoted as an ethic; must be made socially desirable, as was non-smoking.

- Manufacturers should be pressured to make re-usable containers for all variety of consumable items (n.b. foods).

3.2 Co-operative Efforts with Non-Governmental Agencies

- Review and eliminate by-law constraints to re-use.

- Prepare comprehensive list of all agencies promoting re-use, e.g. Church rummage sales, Salvation Army, Waste Not, St. Vincent De Paul, Ex-Toggery, Social Service Agencies, dry cleaners (hangers) etc.

- Need to promote these services better, e.g. publish lists of stores which take back packaging materials.

3.3 Material Re-Use in Schools

- Target not only teachers, but all staff and PTA/Home and School Associations, etc.
- Include daycare centres.

- Discussion on whether it is better to create incentive to reduce/reuse/recycle in schools through high tipping fees, or through program grant structure to fund in-school programs. Schools don't pay directly for disposal. Maybe both are needed; School Boards encouraged to dispose less through high tipping fees pass some of their projected savings on to individual schools in form of grants to implement 3Rs programs.

3.4 In-House Municipal Activities

- The City of Burlington has just established a sustainable development committee to look at these issues.

- Bind all paper printed one side only into scratch pads for in-house use.

- Should also review procurement policies from this perspective.

3.5 Educating the Private Sector

- Work with business and industry associations to reach targeted institutional, commercial and industrial sectors -- Energy Conservation model.

- Develop case study material

- Use "Pulling Together" video produced by Metro Toronto, Waterloo, Peel and Guelph.

3.6 Waste Exchange

- Some waste exchange computer systems not compatible, e.g. Metro and Peel.
- Already have too many waste exchanges in this area
- Encourage local, low-tech exchanges -- they work!
- Speed of information exchange is not important -- it doesn't happen that fast. So save money on big computer system.

3.7 Commercial/Industrial Waste Audits

- Same requirements should first be made of the public sector
- Waste audits should become a condition of approval or licensing of all new facilities.
- Storage recyclables should be included in waste audits/requirements.
- Restaurants should be required to use re-useable utensils
- There should be a deposit on all re-usable items -- the Province's failure to impose a deposit system on soft-drink containers seriously undermines their credibility on waste reduction.
- OMMRI and aluminum cans are just a clever way for industry to hand the waste processing problem to the public sector. We need to hand it back to them.

4.0 RECYCLING

4.1 Diversion of Organic Wastes

- Emphasize the need to get toxics out before large scale composting, (especially in wet-dry system).

- Every community should have one or more local composting facilities. This promotes community awareness and responsibility, and reduces costs and impacts of trucking.

- Most communities will willingly accept such facilities if they are relatively small and handle local waste, but less so if they are large, regional facilities.

- A 200 TPD plant will require 2-3 acres.

- Ensure that central composting doesn't conflict with home composting.

- There is a trade-off between centralization with efficiency, and decentralization with local responsibility.

- Develop specifications for high grade and low grade compost.

- Let's not overlook the value of the visibility of a program like blue box, which we often lose with hi-tech solutions.

- Recognize need for some central composting for apartments, restaurants, the elderly. Perhaps we should start with these.

- Register concern for industrial health and safety issues in manual separation (wet-dry system).

4.2 Expansion of Blue Box Program

- The blue box program was a way for industry (soft drink bottles, container manufacturers) to solve its problems:

  - by shifting the cost and responsibility of empty package handling onto the public sector; and

  - by reducing retailer space required to handle returnables, thereby increasing shelf space and the attractiveness to retailers of their non-returnable packaging.

- Spell out PET and OCC -- not everyone understands

- The blue box also imputes a zero value to waste stream material, in the public mind.

- Municipalities are afraid of shift from aluminum to steel cans, as this will reduce their revenues which support the blue box programs.

- Recommend a deposit on all containers to return responsibility to the manufacturers, reduce waste streams and public sector costs.

4.3 Marketing of Recyclable Material

- Legislation to improve quality of material to be recycled, e.g. require newspapers to use low-toxic ink, then require them to use all recycled content in their newspapers.

4.4 Mandatory Residential Recycling

- Must tell people that disposal bans of certain materials are coming.
- Must ensure there is a market before instituting bans.
- Prefer to take a voluntary approach first.
- Support/enforce December 7, 1989 Ontario resolution on waste reduction.

4.5 Recycling in Schools

- School boards should fully support 3Rs programs.
- Resource people should be available to schools as speakers and assist with curriculum development.
- Request that the Ontario Ministry of Education be required to provide school boards with a grant structure to encourage 3Rs programs in schools by September 1, 1990. This gets away from the voluntary aspects of the STAR program.

4.6 In-House Municipal Activities

- Municipal tendering process must be reviewed to ensure that municipality retains responsibility for the nature of its purchases, and ultimate materials disposition. The GIPPER guidelines which require post-use product value and/or disposition are a quantum leap. These should be made mandatory as much as possible.

- Consider in-house recycling co-ordinator for all municipalities

- Consider worm composting in offices

4.7 Recycling Construction and Demolition Wastes

- Make separation/re-use/recycling a condition of demolition and building permits.
- Promote more R & D here.

- Small generators (e.g. bathroom renovation) have transportation problem -- haulers won't take to distant depots. SWISC could encourage supportive network of drop/transfer stations and transportation facilities to recycling plants.

4.8 Planning By-laws

- Make in-house recycling plants a condition of approval of new industrial facilities.

4.9 Education in Commercial/Industrial Recycling

- We need highly specific and targeted education and promotion programs, not a "broad" program.

4.10 Composting Commercial Sector Organics

- Should do full environmental analysis of all proposed actions.

- Don't support Metro siting a facility outside their boundaries. They should be bending over backwards to site whatever they can in their Region, since they can't have a landfill.

- As a principle, facilities should be within the Region unless there is an impelling environmental or economic reason to have it outside.

- Each municipality should be required to reach diversion targets.

- Re: facilities siting, some economies of scale are essential.

- Transportation and transfer facilities can be local, community based.

4.11 Commercial/Industrial Material Recovery Facility

- No comment.

4.12 Other Incentives and Mechanisms for the Private Sector

- Add plastics and clean wood to potential bans

- Include a list of what is already banned (drywall, tires).

- Delete the word "voluntary".

- What about cars, white goods, "shredder fluff"; how can we build in these steams?

5.0 SUPPORT AND ADMINISTRATION

- Long-term contacts reduce system flexibility. SWISC should encourage small-scale, flexible programming.

- Monitor waste stream composition regularly to ensure our system is responsive.

- Establish clear baseline date for calculating percent diversion

- Big difference if increased by volume or weight. Weight doesn't always give an accurate picture.

- Bring in U of T and York research capabilities.,

- Re: producer pay – define the term "producer", and bring the industrial sector into this discussion.

- Consider all the implications of "producer pay" throughout the waste stream process, at each interface. These interfaces are:

  - Region: local municipality
  - Municipality: domestic/commercial/industrial user
  - User: manufacturer/retailer

V CONCLUSION:

A number of themes frequently surfaced throughout the day's discussion. These may been seen as key principles which, in the views of the participants, should guide the 3Rs action plan. These are:

i) The 3Rs hierarchy should be continuously endorsed, with a strong emphasis on Reduction;

ii) The removal of hazardous wastes from household, industrial, commercial and institutional waste streams is a priority.

iii) In considering alternative courses of action, materials should always be put

to their highest and best use;

iv) Material markets are key to recycling, and must be developed before recycling can be made mandatory;

v) The perspective of the complete material life cycles of products should be adopted in public and private sector purchasing policies;

vi) The promotion of the 3Rs ethic and lifestyle will require an immense effort in education, advertising, publicity and grass roots activities, which should begin immediately on a serious scale.

Appendix C

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APPENDIX C

Listing of SWISC EOIs that Relate to 3Rs Action Plan

A number of submissions received in response to the SWISC Request for Expressions of Interest (EOI) contained a 3Rs component or relate to a potential 3Rs initiative. Many of the ideas contained in the EOIs have been included along with input from other sources in the 3Rs Action Plan.

A listing of these EOI numbers classified by topic together with an identification of relevant page number in the EOI and the key concept proposed is provided in the following listing. This is followed by some additional information on a number of the individual EOIs. This information was compiled by SENES Consultants as part of their Review of the Expressions of Interest submitted to SWISC. A listing that relates the EOI numbers to the specific submissions received by SWISC is also provided.

Additional details on the content of these various expressions of interest can be found in the "Technical Review of Expressions of Interest" by SENES Consultants Limited.

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3Rs IDEAS FOUND IN EOIs

All ideas with respect to reduction in the EOIs were extracted and forwarded to the 3Rs Action Plan group to ensure that they were fully considered.

Many of the EOIs contributed ideas or wished to reinforce those ideas that have been identified in other reports. The EOIs, in most cases, have not offered systems or specific components for these programs, but have suggested that they be a part of the Long-term Waste Management System for the GTA. To acknowledge those EOIs that have directly addressed these ideas we have stated the idea, given their EOI number, listed a page reference and have included identifying comments. These may be summarized as follows:

Reduction

EOI #11	(p 3)	reduction of diaper size and packaging
EOI #14	(p 2.8)	National Packaging Protocol - Canada wide policies
EOI #21	(p 29, 31)	oppose shopping bags and other forms of excess packaging
EOI #48	(p 5, 2.3, 1-3)	revised packaging and returnable requirements
EOI #60	(p 4, LURA)*	System 4; emphasis on repairing incoming materials
	(p 19, LURA)	much more effort is needed in the area of reduction
EOI #83	(p 3)	voluntary and legislative actions and incentives for the reduction of packaging. Refillable containers, specifications towards min. packaging requirements on municipal tender documents. Reduction of throw-aways and manufacturers be encouraged to make modifications.

*EOI #60 was summarized by LURA GROUP: reference is to the summary.

Education

EOI #2	(p 2.41)	general public education
EOI #12	(p 6, 17)	generators must be taught to source separate
EOI #14	(p 2.11)	teach backyard composting
EOI #21	(p 20, 28, 30)	public participation, determine social costs of wastes
EOI #48	(p 2.1-9, 2.2.9-1)	public education, the establishment of a co-ordinating committee with specific mandates

EOI #60	(p 19, LURA)	alternatives to polystyrene and toxic household cleaners
EOI #50	(p 73)	public education through visitations
EOI #73	(p 21)	prepared to offer funding for educational programs

Home Backyard Composting

EOI #14	(p 2.3, 2.11)	a part of municipal and private recovery
EOI #21	(p 31)	suggest expansions in this area
EOI #27	(p 3)	complements their program
EOI #30	(p 5)	highly recommend
EOI #67	(p 6)	suggest home composting
EOI #83	(p 4)	promote

Mandatory Recycling

EOI #14	(p 2.30)	base level of service mandatory within each municipality
EOI #31	(p 2)	totally unnecessary with their system
EOI #50	(p 74)	a must, especially for certain materials; i.e. batteries, tires and household hazardous wastes
EOI #69	(p 4)	mandatory plus 5 containers can achieve 100% participation

As of 1 January 1990, Halton Region has stated that all residents that receive garbage collection service must use their Blue Box.

Bans from Landfill

EOI #12	(p 15)	encourage bans on drywall
EOI #14	(p B.2, B.14)	recycling efforts are greatly assisted
EOI #56	(p 4)	100% recovery of wood from commercial/industrial could be achieved
EOI #83	(p 5)	extend to include glass, metals and plastics

All regions within the GTA have banned old corrugated from landfill and transfer sites. Further bans are pending on drywall and wood pallets.

Research Programs

EOI #3	(p 5, 27)	market research
EOI #8	(p 2.14)	systems research
EOI #13	(p 17)	further applications to their process
EOI #14	(p 2.10, 2.21)	needs and opportunities, market and market development
EOI #16	(p 10)	suggest a research facility at their landfill operations
EOI #17	(p 40)	project technology, facility at Seneca College
EOI #21	(p 31)	waste comparisons with other countries
EOI #22	(p 8, 23)	labs in Canada and Italy
EOI #23	(letter)	access to background Information and technologies
EOI #24	(p 6)	equipment modifications
EOI #35	(p 10)	new exhaust systems for vehicles
EOI #38	(p 13)	examine chemical compositions of packaging
EOI #42	(p 15)	waste specific disposals
EOI #48	(p 5, 6, 2.2.8-1)	a facility, establish secondary disposal sites for non-putrescible wastes
EOI #50	(p 73)	continued search for established uses of diverted product
EOI #51	(p 82)	funding programs, improve MRF components, new end uses or markets for materials
EOI #52	(p 4)	transportation, processing, marketing, environmental protection
EOI #67	(p 29)	formation of a research division
EOI #69	(p 20)	currently completing a feasibility study for composting
EOI #74	(p 1)	compost facility
EOI #78	(p 11-1)	maximize local content
EOI #79	(p 9)	a GTA center for waste reduction
EOI #83	(p 5)	improved methods of composting and more efficient transportation

Demonstration Projects

EOI #11	(p 4, 6)	composting and recycling of disposable diapers
EOI #21	(p 19)	compost project in Edmonton, Alberta
EOI #74	(p 1)	compost facility

Management Services

EOI #2	(p 2.41)	recycling and marketing programs

EOI #8 & #14	(p 1.1)	development, operations, joint ventures
EOI #33	(letter)	development of power generation facilities
EOI #39	(p 2.1)	project management and design
EOI #42	(p 15)	product marketing, contract services for household waste management
EOI #48	(p 3-5, 2.2.7-5)	government participation along with the establishment of a central marketing board
EOI #85	(p 1)	management and information services

Continue Class 1 Blue Box Programs

EOI #3	(p i)	very compatible with curbside
EOI #5	(p 13)	residential waste will only be used after curbside
EOI #6	(letter)	to be done by municipalities and regions
EOI #9	(p 1)	can take source separated & commingled materials
EOI #13	(p 9)	with curbside a purer form of garbage can be processed
EOI #14	(p 2.4)	classify under a heading of Municipal/Private Reduction and Recovery
EOI #22	(p 3)	in conjunction with or independent of
EOI #27	(p 3)	system complements Blue Box
EOI #31	(p 2)	could continue, but would prefer elimination
EOI #32	(p 4)	system can strengthen current programs
EOI #34		can enhance existing programs (recycling section)
EOI #38	(p 12)	enhanced by increasing number of materials
EOI #40	(p 6)	add-on to existing programs
EOI #42	(p 9)	more involvement by the public sector
EOI #43	(p 13)	continue programs to enhance their EFW
EOI #44	(p 9)	compliments any curbside program
EOI #48	(p 3, 2.2.5-7, 2.3.1-9)	want to accommodate in its proposed system
EOI #59	(p 1, 4)	fully complements curbside recycling
EOI #60	(p 2, LURA)	System 1; suggest 2 additional bins, one for additional recyclables, the other for food wastes
EOI #61	(p 4)	continue, and want to handle material generated
EOI #63	(p 19)	want all MSW with the exception of curbside
EOI #65	(p 11)	their system is a natural evolution from Blue Box

EOI #70	(p 5)	after Blue Box collection
EOI #73	(p 3)	process materials that have been thoroughly recycled
EOI #78	(p 4-2)	facility provides the missing link beyond Blue Box
EOI #83	(p 5)	successful, must expand

Expand the Number of Materials in the Blue Box

EOI #9	(p 20)	include mixed papers and OCC
EOI #14	(p B.27, 29)	expand residential plastic and paper collection
EOI #42	(p 9)	more involvement by the public sector
EOI #67	(p 6)	add mixed plastics, packaging, OCC, boxboard, mixed paper
EOI #69	(p 1)	change the system to coloured bags and add plastics, paper and food
EOI #76	(p 1)	change the materials to paper, glass and heavy plastics
EOI #83	(p 5)	extend to include plastic items

Expand Blue Box Collection

EOI #14	(p B.8)	to include apartments and commercial operations
EOI #34		expand to apartments and condominiums (recycling section)
EOI #42	(p 9)	to include apartments and rural to be handled by the public sector
EOI #67	(p 6)	to include apartments and rural collections
EOI #69	(p 7)	change the system to coloured bags, green for metals, glass and plastic; black for newspaper
EOI #77	(p 2-4)	change system to 3 boxes, wet wastes, paper and regular Blue Box materials

Blue Box Program Unnecessary

EOI #13	(p 2)	can take sorted or unsorted curbside garbage
EOI #21	(p 18, 28)	wet/dry system
EOI #22	(p 3)	in conjunction with or independent of
EOI #24	(p 4)	accomplishes recycling without Blue Box collection
EOI #25	(p 6.2, 6.4)	waste does not require pre-treatment, benefits of not having a Blue Box system are stated
EOI #31	(p 12)	suggest elimination so that their system can benefit from the recovery of recyclables
EOI #46	(p 1-3, 2-1)	need processable wastes to make their ORFA product

EOI #51	(p 3)	eliminate Blue Box for a wet/dry system
EOI #60	(p 9, LURA)	use a drop-off system instead of curbside
EOI #71	(p 1)	assumes the elimination of Blue Boxes for wet/dry

Office Paper Recovery Programs

EOI #14	(p 2.5)	delivered to a dedicated processing center
EOI #48	(p 2.2.1-3)	suggest Grey Box system for offices
EOI #72	(p 1)	cube vans for the collection of 90 pound containers

Commercial/Industrial Programs

EOI #5	(p 13)	could be included in program as necessary
EOI #37	(p 8)	recovery and recycling of wood wastes
EOI #38	(p 12)	can take packaging and food wastes
EOI #42	(p 14)	do waste audits and set up source separation
EOI #48	(p 5)	extend existing programs to include commercial/industrial
EOI #51	(p 4)	a commercial/industrial wet/dry program
EOI #55	(p 2)	enhance visions of source separation
EOI #56	(p 3)	recovery and recycling of wood wastes
EOI #65	(p 8)	using technological advances
EOI #72	(p 3)	provide limited receiving and processing facilities

Construction/Demolition Programs

EOI #12	(p 1)	drywall collection at construction sites
EOI #14	(p 2.5, 2.19)	delivered to a dedicated processing center
EOI #15	(p 1)	use of quarry and aggregate equipment
EOI #22	(p 9)	access to German technology
EOI #43	(p 1, 34)	wood, drywall recovery at transfer sites also systems for soil cementing
EOI #48	(p 5)	regulations for source segregation
EOI #51	(p 5)	separate collection system
EOI #55	(p 2)	enhance visions of source separation
EOI #57	(p 2)	the reuse of construction/demolition as well as soil and fill
EOI #72	(p 3)	provide limited receiving and processing facilities

Full Wet/Dry Collection for Composting

EOI #21 (p 18, 28)	preferable system, separate waste collection
EOI #51 (p 3)	wet/dry collection to include households and apartments
EOI #65A(letter)	dry recyclables, wet kitchen and yard wastes
EOI #71 (p 1)	assumes a wet/dry system will occur

Garden and Leaf Collection for Composting

EOI #9 (p 1)	suggest composting of yard wastes only
EOI #30 (p 2)	composting of yard wastes only
EOI #51 (p 5)	separate yard waste collection
EOI #65A(letter)	wet includes kitchen and yard wastes
EOI #69 (p 7)	orange bag for the collection of yard wastes
EOI #72 (p 3)	provide limited receiving and processing facilities
EOI #77 (p 3-2)	special waste collection
EOI #83 (p 5)	Municipal collection

Household Organics Collection for Composting

EOI #14 (p 2.2, 2.4)	can get a purestream of organics
EOI #21 (p 18, 28)	suggest a full wet/dry system
EOI #27 (p 17)	separate collection system
EOI #41 (p 2)	organics into the sewage system via garbage grinders
EOI #51 (p 3)	wet/dry system includes households and apartments
EOI #65A(letter)	dry recyclables and wet kitchen and yard wastes
EOI #67 (p 6)	separate collection of home organics
EOI #69 (p 7)	a clear bag for the collection of organics and paper
EOI #77 (p 2-4)	3 box system one for wet wastes, one for paper, one for regular Blue Box material

Commercial Organics Collection for Composting

EOI #14 (p 2.4, 2.12)	can get a purestream of organics
EOI #27 (p 18)	separate collection
EOI #77 (p 2-4)	3 box system, one for wet wastes, one for paper one for the normal Blue Box waste
EOI #38 (p 12)	can take packaging and food wastes

Transportation and Collection Enhancements

EOI #8	(p 2.3)	material collected and transferred through handling centres
EOI #9	(p 20)	separate collection days and/or vehicles for different materials
EOI #21	(p 18)	two compartment trucks for wet/dry materials
EOI #26	(p 7)	special vehicles to pick-up igloos
EOI #27	(p 17)	separate pick-up of organics
EOI #31	(p 12)	rapid rail automated pick-up system
EOI #52	(p 6)	rail transportation plan
EOI #60	(p 2, LURA)	System 1; modified garbage trucks for compostables and recyclables
EOI #61	(p 4, 50)	intermodal transportation facilities
EOI #62	(p 4)	intermodal freight systems
EOI #73	(p 4)	delivery of material to EFW plant in Newfoundland

Depots and Drop-Off Centres

EOI #14	(p 2.9, B.9)	suggest universal drop-off centers
EOI #26	(p 7)	igloos for litter control, high traffic areas
EOI #43	(p 13)	suggest igloo program to enhance their EFW plant
EOI #48	(p 2.2.2-3)	facilities at receiving stations
EOI #60	(p 3, LURA)	System 3; drop-off containers at recycling facility
	(p 9, LURA)	System 11; use of 4 bin system and drop-off centres
	(p 13, LURA)	System 18; drop-off centres at waste storage facilities

Hazardous Wastes

EOI #17	(p 12)	can accept most hazardous wastes
EOI #22	(p 9)	can deal with a Vortex burner
EOI #32	(p 3)	can be set up as HHW collection stations
EOI #60	(p 2, LURA)	System 1; set up separate collection
	(p 9, LURA)	System 12; recovery of toxic metals from batteries
	(p 13, LURA)	System 17; national battery collection program
EOI #66	(p 9)	encourage source separation
EOI #67	(p 6)	special collection, storage and safe disposal
EOI #69	(p 7)	the use of Blue Boxes for the collection of H.W.
EOI #73	(p 13)	able to dispose of HHW

Other Materials

EOI #12	(p 1)	drywall collection
EOI #22	(p 10)	tire freezing with liquid nitrogen
EOI #35	(p 8, 9)	crumbing of tires, metered injection system for used oil and a new fibre board plant for wood
EOI #37	(p 8)	recovery and recycling of wood wastes, delivered
EOI #38	(p 4)	recovery and composting of food and health care wastes
EOI #51	(p 3)	systems for tire shredding, appliance reclamation and waste oil recovery
EOI #60	(p 3, LURA)	System 2; conversion of mixed plastics into useable products
	(p 10, LURA)	System 13; incineration of tires for fuel
	(p 11, LURA)	Systems 14 & 15; processing of tires
	(p 14, LURA)	System 19; extract oil from tires
	(p 15, LURA)	System 20, 21 & 22; polystyrene recycling
EOI #66	(p 9)	encourage source separation of batteries
EOI #77	(p 3-2)	special collection of wood
EOI #78	(p 9-1)	scrap tire disposal
EOI #83	(p 5)	stockpile for future use

Waste Exchanges

EOI #83	(p 4)	post consumer materials exchange; donations of clothing building material outlets; individual and group incentives, i.e. garage sales; manufacturers should be encouraged to become involved.

<u>Components with immediate potential to assist 3Rs.</u>

As well as being considered as material recovery facilities for the long-term system, EOIs were identified as warranting consideration for immediate implementation to process specific materials, namely:

- Wood
  - EOI #37 Wood Waste Solutions and
    EOI #56 Chasson Pellets Ltd.

- Drywall
  - EOI #12 Noel de Sautels

- Construction/Demolition
  - EOI #15 Expocrete Ltd.
  - EOI #42 Browning Ferris Industries Ltd.
  - EOI #45 Waste Streams Systems Ltd.
  - EOI #55 Dual Environmental Systems
  - EOI #72 Markham Disposal

- Food Waste
  - EOI #38 Redipac Recycling Inc.

- Mixed Plastics
  - EOI #38 Redipac Recycling
  - EOI #58 Weldex Company

- Tires
  - EOI #7 Cogenisis Corp.
  - EOI #25 Kilborn Ltd.
  - EOI #58 Weldex Company
  - EOI #67 Laidla w Waste Systems.

Several EOIs stressed the importance of the removal of Hazardous Wastes from the waste streams. This is becoming more critical with increased sophistication of the waste management components and is considered an essential element to proceed with in the 3Rs action plan.

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SWISC

SOLID WASTE INTERIM STEERING COMMITTEE

Box 458, Adelaide P.O., Toronto, Ontario, M5C 2J5
Telephone: (416) 941-8373, Fax: (416) 863-0926

LIST OF SUBMISSIONS RECEIVED BY SWISC BY 3:00 P.M., DECEMBER 28, 1989
WITH RESPECT TO THE LONG-TERM SYSTEM

	Respondent	System &/or Component
1.	Lamarche McGuinty Inc., Shawville, P.Q.	Component
2.	Westinghouse Resource Energy, Pittsburgh, Penn.	Component
3.	Advanced Ecology Corp., Vancouver, B.C.	Component
4.	Dynavest International Ltd., St. Louis, Missouri	Component/System
5.	St. Lawrence Cement Inc., Mont Royal, P.Q.	Component/System
6.	Buhler-Miag (Canada) Ltd., Don Mills, Ont.	Component
7.	Cogenesis Corp., Milpitas, California	Component/System
8.	Lavalin Engineers Inc., Willowdale, Ontario	System
9.	Foster Wheeler Power Systems Inc., Clinton, N.J.	Component/System
10.	NSP Investments Ltd., Mississauga, Ont.	Component
11.	Proctor & Gamble Inc., Toronto, Ont.	Component
12.	Noel Richard Desautels & Paul Detering, Toronto, Ont.	Component
13.	Dynaforce Waste Reductions Inc., Goderich, Ont.	Component
14.	MacLaren Engineers Inc., Willowdale, Ont.	Component
15.	Expocrete Ltd., Burlington, Ont.	Component
16.	Armbro Materials & Construction Ltd., Brampton, Ont.	Component
17.	Waste Distillation (WDT Canada) Inc., Montreal, P.Q. and Sussex Environmental Services Inc., London, Ont.	Component
18.	WPF Corp., Bellevue, Ohio and BLI Intl. Inc., Ranch Cucamonga, California	Component
19.	Kenox Corp., North York, Ont.	Component
20.	See-Bah Waste Elimination Technologies Inc., Sault Ste. Marie, Ont.	Component/System
21.	Round-Up Waste Prevention Inc., Canmore, Alta.	Component
22.	Nera Bioenergy Corp., Montreal, P.Q.	Component
23.	Swedish Trade Council	Undetermined
24.	Environmental Disposal Systems Inc., Bristol, Virginia	Component
25.	Kilborn Ltd., Toronto, Ont.	Component
26.	Igloo Recycling System Inc., Toronto, Ont.	Component
27.	Airite Environmental Industries Inc., Richmond Hill, Ont.	Component
28.	Superior-Crawford Sand & Gravel Ltd., Maple, Ont.	Component
29.	EnComp Limited, Toronto, Ont.	Component
30.	Compost Management Associates Ltd., Toronto, Ont.	Component
31.	Reuter of Canada Inc., Toronto, Ont.	Component/System
32.	Recomp Inc., Denver, Colorado	Component
33.	TransCanada Pipelines, Calgary, Alta.	Component
34.	Notre Development Corporation, North Bay, Ont.	Component
35.	Enviromax Corp., Caledonia, Ont.	Component/System

36.	808106 Ontario Inc., Cambridge, Ont.	Undetermined
37.	Wood Waste Solutions Inc., Toronto, Ont.	Component
38.	Redipac Recycling Inc., Etobicoke, Ont.	Component
39.	SNC Inc., Montreal, P.Q.	Component
40.	Crang & Boake Inc., Don Mills, Ont., H. D. Spencer Associates, Toronto, Ont. and Von Roll Limited, Zurich, Switzerland	Component
41.	I-S-E Sales/Emerson Electric Canada, Markham, Ont.	Component
42.	Browning Ferris Industries Inc., Toronto, Ont.	Component
43.	Stinnes Enerco Inc., Toronto, Ont.	Component
44.	Trican Energy Systems Ltd., Brantford, Ont.	Component
45.	Wastestreams Systems Ltd., Toronto, Ont.	Component
46.	Agra Industries ltd., Mississauga, Ont.	Component
47.	Nelson Aggregate Co., Burlington, Ont.	Component
48.	Equity Waste Management of Canada Corp., Toronto, Ont.	System
49.	Steetley Quarry Products Inc., Hamilton, Ont.	Component
50.	Inducon Development Corporation, Morristown, N.J.	System
51.	WMI Waste Management of Canada Inc., Mississauga, Ont.	System
52.	Ontario Northland Transportation Commission, North Bay, Ontario	Component
53.	Ontario Northland Transportation Commission, North Bay, Ontario	System
54.	Ontario Northland Transportation Commission, North Bay, Ontario	Component
55.	Dual Environmental Systems Inc., Toronto, Ont.	Component
56.	Chasson Pallets Ltd., Port Perry, Ont.	Component
57.	Trow, Brampton, Ont. and Dames & Moore, Los Angeles, California	Component
58.	Weldex Company Ltd., Oakville, Ont.	Component
59.	Agripost, Pompano Beach, Flordia	Component
60.	Enviro-Watch Federation, Georgetown, Ontario	Undetermined
61.	CN Rail and Bechtel Canada Inc., Toronto, Ont.	Component
62.	CP Rail, Toronto, Ont.	Component
63.	Royaledge Industries Inc., Burlington, Ont. and Pro-Cyss Waste Corp., Lakewood, Col.	Component
64.	Wastech/Robert S. Lawrie Ltd., Markham, Ont.	Component
65.	Otto-Canada Inc., Mississauga and Halton-Otto Recycling Ltd.	Component/System
66.	Pattison Information Inc., Toronto, Ont.	System
67.	Laidlaw Waste Systems, Burlington, Ont.	System
68.	ICG Co-Gen Ltd., Toronto, Ont.	Component
69.	MSW Recycling Corp., Toronto, Ont.	Component
70.	Faruk Fattah, Toronto, Ont.	Component
71.	Environmental Air Structure Technologies, Mt. Clemens, Michigan	Component
72.	Markham Disposal/Miller Paving Ltd., Markham, Ont.	Component
73.	Surety Environmental Inc., Calgary, Alta.	System

74.	Bedminster Bioconversion Corp., Cherry Hill, N.J.	Component
75.	Ontario Northland Transportation Commission North Bay, Ont.	Component
76.	Muscillo Transport Ltd., Kleinberg, Ont.	Component
77.	Montenay Inc., Montreal, P.Q.	Component
78.	Ogden, Martin Systems, Mississauga, Ont.	Component
79.	Ortech International, Mississauga	Component
80.	Paul Temelini, Sudbury	Undetermined
81.	Methon Energy Corp. Inc., Maple, Ont.	Component
82.	Chivers-Wilson Consulting, Nepean, Ont.	Undetermined
83.	Renutech Corp., Ottawa, Ont.	Undetermined
84.	W. Hutchinson, Walkerton, Ont.	Component
85.	Stone & Webster Canada Ltd., Toronto, Ont.	Undetermined
86.	Standard Aggregates Inc.	Undetermined